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# INTERORGANIZATIONAL LINKAGES AND THE EFFECTIVENESS OF CLINICAL PRACTICE IN TWO ALLIED HEALTH PROFESSIONS IN KENYA

by

© ALFRED MWONGERA MUTEMA

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# ABSTRACT

The purposes of the study were: (1) to describe interorganizational linkages between the Medical Training Centre (MTC) and eight provincial hospitals in the departments of occupational therapy and physiotherapy in Kenya; (2) to determine the effectiveness of clinical practice in these two fields in each of the provincial hospitals; (3) to determine the ideal importance of broad goals of clinical practice in each provincial hospital; and (4) to examine the relationships between the forms of linkages and the effectiveness of clinical practice. In order to accomplish the purposes of the study, several subproblems pertaining to linkage dimensions, effectiveness and ideal importance of broad goals of clinical practice were formulated.

Based upon a review of literature on interorganizational relationships and organizational effectiveness, a conceptual framework that encompassed the linkage dimensions and the effectiveness of clinical practice was developed for the study. The linkage dimension variables were: (1) formalization; (2) intensity; (3) reciprocity; and (4) standardization. The effectiveness variables were the seven broad goals of clinical practice for occupational therapy and physiotherapy. These were: (1) evaluating patients; (2) formulating aims of treatment and carrying out treatment; (3) broadening medical knowledge and terminology; (4) using self as a therapeutic medium; (5) developing communication skills; (6) developing professional attitudes; and (7) performing administrative functions.

The provincial general hospitals that were studied were the

(1) Kenyatta National hospital; (2) Nakuru provincial hospital; (3) Nyeri provincial hospital; (4) Machakos provincial hospital; (5) Kakamega provincial hospital; (6) Mathari hospital; (7) Nyanza provincial hospital and (8) the Coast general hospital.

Two instruments were utilized in this study. These were: (1) a questionnaire that had two parts and (2) a semi-structured interview guide. Part 1 of the questionnaire was used to gather data on eight demographic variables, the effectiveness of clinical practice and the ideal importance of broad goals of clinical practice. This part of the questionnaire was completed by all the respondents involved in the study. Seventy-one of 91 occupational therapy respondents and eighty seven of 114 physiotherapy respondents returned usable questionnaires.

Part II of the questionnaire was used to gather data on linkage dimensions and it was completed by twelve department heads in the provincial hospitals in the departments of occupational therapy and physiotherapy. Twelve interviews were conducted with the department heads in order to gather in-depth information on linkage dimensions and on the effectiveness of clinical practice.

The analysis of data on demographic variables involved the determination of the frequencies and percentages for the occupational therapy and physiotherapy respondents. The analysis of data on effectiveness involved the use of factor analysis (varimax rotated matrix), descriptive statistics and tests of significance.

One-way analysis of variance was used when more than two group means of effectiveness were compared and the "t"test was used when two group means were compared. Following the analysis of variance, where

the F ratio was statistically significant at the 0.05 level, the Scheffé Multiple Comparison of Means was used to determine which pairs of group means differed significantly.

The major findings and conclusions of the study were:

The degree of formalization of the relationship and the degree of procedural standardization of the relationship between the Medical Training Centre and the eight provincial hospitals were found to be informal and low respectively. However, the degree of intensity of the relationship and the degree of reciprocity of the relationship between the eight provincial hospitals and the Medical Training Centre in both the departments of occupational therapy and physiotherapy were found to vary, from hospital to hospital.

The overall effectiveness of clinical practice in each provincial hospital was perceived by both the occupational therapy and the physiotherapy respondents to be "fair".

The clinical practice was perceived to be less effective by the occupational therapy and physiotherapy students whereas the physiotherapists and the occupational therapists perceived the clinical practice to be more effective.

Based upon the data examined in this study and the findings obtained the following major conclusions were drawn:

Medical training institutions and teaching hospitals may develop voluntary interactions for purposes of specific goal attainments without formal agreements. The voluntary interactions may be

characterized by informal agreements, low procedural standardization and varying degrees of intensity and reciprocity.

The other major conclusion drawn from the findings of this study is that allied health programs which are considered ineffective by students may be considered effective by qualified allied health professionals.

The third major conclusion drawn from the findings of this study is that it was difficult to establish the impact of linkage dimensions on the effectiveness of clinical practice in the two allied health professions that were considered in this study. The findings revealed that the relationships between the Medical Training Centre and the provincial general hospitals appeared to vary from hospital to hospital but the effectiveness of clinical practice in each of the eight provincial hospitals was found to be "fair".

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# CHAPTER 1

## INTRODUCTION AND BACKGROUND TO THE STUDY

Medical schools and teaching hospitals are two types of complex human service organizations that share and exchange resources in order to accomplish their goals.

Derzon (1978:19) pointed out:

> The alliance of medical schools and teaching hospitals is indisputable and inseparable. . . . The fortunes of the school and the hospital are completely interlocked and interdependent. One cannot succeed if the other fails. One cannot be great if the other is only good.

According to Hall, Clark, Agronomo and Vanroekel (1977:457) increased attention has been directed during the past two decades toward interorganizational relationships, dependencies and resource exchanges in an attempt to develop conceptual frameworks to facilitate the study of interorganizational relations.

Marrett (1971) proposed that one useful way of studying interorganizatinal relationships is to focus on the forms of linkage that join organizations to each other. The forms of linkage have been associated with organizational effectiveness by at least two researchers (Andrews, 1978 and Young, 1979).

Hall (1977:1) stated that of all the concepts which are important to organizational theory, effectiveness stands out as the most crucial. Ratsoy (1978:2) pointed out:

> Much has been written on the need to make organizations more effective, but there is a lack of agreement on the meaning of organizational effectiveness, on what criteria its assessment should be based, and how it may be attained.

Other writers have indicated the lack of consensus on the meaning of organizational effectiveness (Steers, 1976; Campbell, 1976; Hall, 1977; Spray, 1976; Dubin, 1976; Ghorpade, 1971 and Price, 1968). The available literature indicates that there is no universally accepted approach for the study of organizational effectiveness. However, Steers (1977:4) on examining the various approaches of evaluating effectiveness in organizations concluded that the majority of the approaches rest ultimately on some measure of organizational goal attainment .

The provincial hospitals and the Medical Training Centre in Kenya are two types of human service organizations that are interlocked and interdependent on each other because of students' clinical practice. The students from the Medical Training Centre are provided with facilities for clinical practice and clinical research in the provincial hospitals. On the other hand, the provincial hospitals are provided with students' services from the Medical Training Centre during clinical practice.

The available literature indicates that no research has been conducted (1) to examine the relationships between these organizations and (2) to determine the effectiveness of clinical practice in allied health professions in Kenya.

Therefore, the purposes of this study were: (1) to describe interorganizational linkages between the Medical Training Centre and the provincial hospitals in the departments of occupational therapy and physiotherapy in Kenya; (2) to determine the effectiveness of clinical practice in the provincial hospitals, (3) to determine the ideal importance of broad goal statements of clinical practice; and (4) to examine what relationships existed between the forms of linkages and the effectiveness of clinical practice.

## Background to the Study

The Medical Training Centre is a Kenyan government institution under the Ministry of Health that is responsible for the training of all cadres in allied health professions in Kenya. It has nine faculties of allied health professions with approximately 4,500 students and about 200 teaching staff. For the Medical Training Centre to achieve the goals of clinical practice it relies heavily on the Kenyatta National hospital, the provincial general hospitals and the district hospitals. The Kenyatta National hospital is a major teaching and referral hospital that provides students from the University of Nairobi (Medical School) and the Medical Training Centre with clinical practice. However, the provincial general hospitals provide some clinical facilities for students from the Medical Training Centre.

The clinical practice for students in allied health professions is an essential part of the training program. During this period students are exposed to different clinical settings under the supervision of qualified personnel. In order to achieve the goals of clinical practice, the Medical Training Centre and the provincial general hospitals share and exchange different types of resources. These resources are: (1) tutors, (2) clinical instructors, (3) information and ideas, (4) equipment and materials, and (5) in some cases, funds.

The supervision of students during clinical practice is normally the responsibility of qualified professionals in the hospitals. These professionals assist the students to put into practice the theory learned in the Medical School. However, in some faculties the responsibility is shared between the teaching staff and the hospital staff. The administrators and the tutors in the Medical Training Centre have been concerned with the effectiveness of clinical practice and the total training programs for allied health professionals. Migue (1980:18) pointed out that, for Kenya to have a better quality of health services, students in allied health professions should be provided with well trained teaching staff and better clinical facilities during their training programs.

Normally, the clinical practice for students in occupational therapy and physiotherapy departments is approximately one year. During clinical practice, the students are visited by tutors from the Medical Training Centre in each clinical setting. After the completion of the clinical practice the students return to the Medical Training Centre to prepare for final examinations that include theoretical and practical examinations.

The examinations are prepared by the tutors. However, some qualified therapists from the hospitals are invited as external examiners for the practical examinations.

## THE PURPOSE OF THE STUDY

### Purpose of the Study

The purposes of the study were: (1) to describe interorganizational linkages between the Medical Training Centre and the provincial hospitals in the departments of occupational therapy and physiotherapy in Kenya; (2) to determine the effectiveness of clinical practice in these two fields in the provincial hospitals (3) to determine the ideal importance of broad goal statements of clinical practice; and (4) to examine the relationships between the forms of linkages and the effectiveness of clinical practice.

To accomplish the purposes of the study the following sub-problems pertaining to linkage activities, effectiveness and ideal importance of broad goal statements were formulated.

## PROBLEM 1: FORMALIZATION

### Sub-problem 1.1

Were there formal or informal agreements between the MTC and the provincial general hospitals in the departments of occupational therapy and physiotherapy?

### Sub-problem 1.2

Was there formal or informal co-ordination of students' clinical practice between the MTC and the provincial general hospitals in the departments of occupational therapy and physiotherapy?

## PROBLEM 2: INTENSITY

### Sub-problem 2.1

What was the frequency of interactions between the MTC and the provincial general hospitals in the departments of occupational therapy and physiotherapy?

### Sub-problem 2.2

What were the relative resource commitments between the MTC and the provincial general hospitals in the departments of occupational therapy and physiotherapy?

## PROBLEM 3: RECIPROCITY

### Sub-problem 3.1

Were there unilateral or bilateral exchanges of resources between the MTC and the provincial general hospitals in the departments of occupational therapy and physiotherapy?

### Sub-problem 3.2

Were the conditions of resource exchanges between the MTC and the provincial general hospitals in the departments of occupational therapy and physiotherapy mutually agreed upon?

## PROBLEM 4: STANDARDIZATION

### Sub-problem 4.1

To what extent were the rules, regulations and procedures for carrying out transactions between the MTC and the provincial general hospitals in the departments of occupational therapy and physiotherapy clearly defined?

## PROBLEM 5: EFFECTIVENESS

### Sub-problem 5.1

What were the perceptions of both the occupational therapy and physiotherapy respondents in each provincial general hospital on the effectiveness of clinical practice?

Sub-problem 5.2

What were the perceptions of the four sub-groups of respondents, namely physiotherapists, occupational therapists, physiotherapy students and occupational therapy students on the overall effectiveness of clinical practice?

Sub-problem 5.3

Were there differences among the four sub-groups of respondents in their perceptions of the overall effectiveness of clinical practice?

Sub-problem 5.4

Were there differences between the occupational therapy and physiotherapy respondents in their perceptions of the overall effectiveness of clinical practice?

## PROBLEM 6: IDEAL IMPORTANCE OF BROAD GOAL STATEMENTS

Sub-problem 6.1

What were the perceptions of both the occupational therapy and physiotherapy respondents in each provincial general hospital on the ideal importance of broad goal statements of clinical practice?

Sub-problem 6.2

Were there differences between the occupational therapy and physiotherapy respondents in their perceptions of ideal importance of broad goal statements of clinical practice?

Sub-problem 6.3

Were there differences among the four sub-groups of respondents in their perceptions of ideal importance of broad goal statements of clinical practice?

Sub-problem 7

What were the relationships between the forms of linkages and the effectiveness of clinical practice?

## SIGNIFICANCE OF THE STUDY

The significance of this study was based on the following:

### Theoretical Significance

From the literature review, there seems to be very little research on interorganizational relations compared with intra-organizational research and theory. According to Van De Ven (1976:24) "knowledge of the inter-organizational field is still at a primitive stage. No generally accepted framework, theory, or methods have emerged from research and practice." Marrett (1971:83) pointed out:

> Although the work on interorganizational relations is not nearly as extensive as that on intraorganizational problems, there has been a substantial growth of discussions on organizational interaction.

Other writers have indicated that the field of study on the interorganizational relations that exist among social units have been intuitively recognized for some time, but that the formal work to incorporate this field into the more general theoretical and conceptual schema is of recent vintage (Negandhi, 1975; Aiken and Hage, 1968; Emery and Trist, 1954; Evan, 1966 and Aldrich, 1972).

Hasenfeld and English (1977:540) stated:

> . . . It is useful to study interorganizational relationships in order to understand the conditions that lead to the emergence of relationships between organizations, to become sensitive to consequences of these relationships on intraorganizational structures, processes and clientele, and to become aware of the forms of linkages which effectively join organizations to each other.

Hall et al. (1977:457) pointed out:

> . . . being aware of the forms of linkages that join organizations (or parts of an organization) . . . will permit an organization to better anticipate the consequences of their relationships and develop or change its organizational structure to improve the relationships.

Given the recent developments in the interorganizational relations field; this study may assist in filling the gap in the research literature regarding interorganizational relations. Such information may be useful in building frameworks for studying interorganizational relations in the future.

## Practical Significance

Post-secondary institutions and especially medical training institutions are becoming involved with other external organizations in order to achieve their goals. The Medical Training Centre and the provincial hospitals in Kenya are complex human service organizations that are interlocked and dependent on each other as a result of the students' clinical practice and other resources that are shared or exchanged between one another.

The Medical Training Centre provides professional services to the provincial hospitals during students' clincial practice while the provincial hospitals provide students and tutors from the Medical Training Centre with clinical facilities in order to accomplish the goals of clinical practice.

The effectiveness of clinical practice in provincial hospitals is affected by several factors. However, the relationship between the Medical Training Centre and the provincial hospitals is one major factor having an impact on the effectiveness of clinical practice since there are several resources that are shared during students' clinical practice.

Hall (1977) and Hasenfeld and English (1974) stressed the importance of human service organizations being cognizant of the forms of linkage mechanisms that join organizations. Such information, they argued, will permit organizations to better anticipate the consequences of the relationship to refine or change their organizational structure to improve the relationship.

From this perspective the understanding of the forms of linkages that exist between the Medical Training Centre and the provincial hospitals may be useful in anticipating the effectiveness of clinical practice in the two professions. Thus, the findings in this study may be used by administrators and professionals in the Ministry of Health in Kenya for planning, improving, coordinating, reorganizing and evaluating the clinical practice in the two allied health professions in Kenya.

## DELIMITATIONS

In this study the following were considered as delimitations:

1. The study was delimited to eight provincial general hospitals in Kenya.
2. The study was delimited to the departments of occupational therapy and physiotherapy in the eight provincial general hospitals.
3. The analysis of interorganizational relations was delimited to the relational dimensions of formalization, intensity, reciprocity and standardization.

4. The measure of effectiveness of clinical practice in the two allied health professions was delimited to the "goals approach".
5. The study was delimited to the effectiveness of clinical practice in the eight provincial hospitals.

## ASSUMPTIONS

For the purpose of this study the following assumptions were made:

1. The measures of linkage dimensions that were employed in this study were appropriate means for examining interorganizational relations in joint cooperative programs.
2. The "goals approach" as employed in this study was an appropriate measure of the effectiveness of clinical practice in the provincial hospitals.
3. The perceptions of respondents regarding linkage activities, effectiveness and ideal importance of broad goal statements of clinical practice were valid means for assessing these variables.
4. The clinical practice is a joint cooperative part of a training program in occupational therapy and physiotherapy from which one can describe the forms of linkages between relatively autonomous organizations, namely the Medical Training Centre and the provincial hospitals in Kenya.

## LIMITATIONS

The delimitations and assumptions made for this study imposed some limitations to it. The population included only therapists and students who had worked or were working in provincial general hospitals. Therefore, no generalizations can be made about linkage activities and effectiveness of clinical practice in district hospitals and or organizations where students do their clinical practice.

## DEFINITION OF TERMS

The following terms were operationally defined in the context of this study:

1. Clinical practice: In this study clinical practice refers to nine months period during which students in the departments of occupational therapy and physiotherapy in the Medical Training Centre are given opportunities to put into practice the skills learned. During this period the students are supervised by qualified professional personnel in various processes in different clinical settings in provincial hospitals.

2. Resources: For the purpose of this study, resources refer to (1) tutors, (2) students, (3) therapeutic equipment and materials, (4) funds, (5) information and ideas, and (6) clinical instructors.

3. Medical Training Centre: The Medical Training Centre refers to a Kenyan government institution that is responsible for the training of all allied health professionals. It has nine faculties of allied health professions with approximately 4,800 students and' about 200 tutors.

4. Joint Cooperative programs: For the purpose of this study joint cooperative programs refer to occupational therapy and physiotherapy programs. These two programs have their theoretical phase of training conducted at the Medical Training Centre and their clinical phase in the provincial and district hospitals in Kenya.

5. Linkage Dimensions: In this study, linkage dimensions refer

to the relational properties or characteristics of the connection between the departments of occupational therapy and physiotherapy in the provincial hospitals and the Medical Training Centre.

6. Formalization: In this study, formalization is used to refer to the degree to which exchanges of resources between the Medical Training Centre and the provincial hospitals in the departments of occupational therapy and physiotherapy were given official sanction.

7. Intensity: In this study, intensity was used to refer to two indicators: (1) the frequency of interaction, and (2) the size of resource commitment between the provincial general hospitals and the Medical Training Centre in the departments of physiotherapy and occupational therapy.

8. Reciprocity: For the purpose of this study, reciprocity refers (1) to the extent to which there were unilateral or bilateral exchanges of resources and (2) the extent to which the conditions of resource exchanges were mutually agreed upon. The exchanges of resources were between the provincial general hospitals and the Medical Training Centre in the departments of physiotherapy and occupational therapy.

9. Effectiveness of clinical practice: In this study, effectiveness was used to refer to the extent to which the provincial hospitals provided students with opportunities to achieve the goals of clinical practice in two allied health professions.

10. Procedural standardization: In this study, procedural standardization refers to the extent to which rules, regulations and procedures in the departments of occupational therapy and physiotherapy in provincial general hospitals were clearly defined.

## ORGANIZATION OF THE THESIS

The content of this chapter comprised (1) an introduction and background to the study, (2) the purpose of the study, (3) the significance of the study, (4) the delimitations, (5) the assumptions, (6) the limitations, and (7) the definition of terms.

Chapter 2 reviews pertinent research and theory pertaining to interorganizational relationships and organizational effectiveness from which key concepts are identified to form the conceptual framework for the study. In this Chapter, the relational properties approach for examining interorganizational relations and the goals approach for examining organizational effectiveness are reviewed. These two approaches are considered appropriate in developing the conceptual framework for the study.

Chapter 3 presents research design and methodology. The first section includes the purpose of the study, the research variables, the population for the study, the development and validation of the instruments, and the reliability of the questionnaire. The section on research methodology includes the procedures followed to get permission to conduct the research, some background information about the administrative provinces of Kenya, the provincial hospitals and their relationships with the Medical Training Centre. Also, the methodology for data collection and the analysis of data are presented in this chapter.

Chapter 4 presents the questionnaire rate of returns, the analysis of data on demographic variables and exploratory factor analysis of effectiveness variables.

Chapters 5 through 12 presents the analysis of data on linkage dimensions, effectiveness and ideal importance of broad goal statements in eight provincial hospitals.

Chapter 13 presents a comparative analysis of the eight hospitals studied. Also, in this chapter statistical analyses of three sub-problems pertaining to the overall effectiveness of clinical practice and two sub-problems pertaining to the ideal importance of broad goal statements are presented. The last section of this chapter examines what relationships existed between the linkage dimensions and the effectiveness of clinical practice.

Chapter 14 presents the summary, conclusions, implications and suggestions for further research that were derived from the study.

# CHAPTER 2

# REVIEW OF LITERATURE AND CONCEPTUAL FRAMEWORK

In this chapter some theory and research findings related to interorganizational relationships and organizational effectiveness will be reviewed. The review of literature will be divided into seven major areas. These are: (1) an overview of interorganizational relationships; (2) the marriage of medical schools to teaching hospitals; (3) approaches to interorganizational relations; (4) the concept of organizational effectiveness; (5) approaches to organizational effectiveness; (6) functions of goals for organizations and for individuals; and (7) student evaluation of clinical practice.

## INTERORGANIZATIONAL RELATIONSHIPS: AN OVERVIEW

Interorganizational relations have been conceptualized in different ways. Negandhi (1975:1) stated that interorganizational theorists conceptualize interorganizational relations at the general systems level. They examine the impact of external environment and/or the outer social units on the internal functioning of an organization. Evan (1966:175) pointed out that interorganizational relations are "boundary-relationships which confront all social systems and are conducted by boundary personnel." Hasenfeld and English (1977:540) defined interorganizational relations as the variety of interactions between two or more organizations designed to enhance organizational goals.

The available literature indicates that there is a considerable amount of research on formal organizations and their internal patterns and structure. Maurer (1971:33) pointed out that most scientists and especially sociologists have done a lot of work on informal groups, formal subunits and structural attributes of organizations. However, although organizations are embedded in an environment of other organizations, there seems to be a relative neglect of interorganizational relationships. Maurer (1971:33) stated:

> The phenomena and problems of interorganizational relations are part of the general class of boundary-relations problems confronting all types of social systems, including formal organizations. All such boundary relations tend to be enormously complex. Apart from sheer complexity, problems of interorganizational relations have been neglected by organization analysts in part because of the concepts and propositions of various theories of organizations.

Maurer (1971) argued that although there has been a neglect of interorganizational phenomena, managers (administrators) are greatly involved with interorganizational relations. Millett (1962:3) pointed out:

> . . . our practice has far outrun our organizational theory. . . . The art of organizations has much more to its credit than has the science of organizations.

In the last two decades some researchers (Evan, 1966; Levine and White, 1961; Litwak and Hylton, 1962; Thompson, 1967; Negandhi 1975; Andrews, 1978; Ratsoy, 1978; and Young, 1979) have been involved in research that considered the organization in its environment as a unit of observation and analysis. Schnee (1977) in a study of interorganizational coordination in health organizations indicated that the study of interorganizational relations has become the subject of sociological enquiry. The study by Aiken and Hage (1968) on "organizational interdependence and intra-organizational structure," and the study of

Benson et al. (1973) on "coordinating human services" are examples. Also recent studies in education indicate the growing interest and value of interorganizational research in human service organizations. The study by Andrews (1978), Young (1979) and Ratsoy (1978) are examples. These studies will be reviewed later in the chapter.

The available literature revealed that few studies on interorganizational relations in health service organizations, e.g. medical schools and teaching hospitals have been conducted. Hasenfeld and English (1977:540) have indicated that the increasing development of formalization between organizations has illuminated the significance of interorganizational research. However, although there is some growing interest and value of interorganizational research in human service organizations, some writers have pointed out that empirical research and theory in interorganizational relations currently display two deficiencies: (1) a conceptual framework applicable to all interorganizational relations' studies; and (2) insufficient attention that is directed to the issues of macro-structures. Schnee (1977:21) and Benson (1975:229) have indicated that most of the studies on interorganizational relations have directed their attention to patterns of interagency cooperation and exchange rather than problems of interorganizational dominance. From this perspective it may be noted that there is a lack of integrative conceptual framework for studies in the area of interorganizational relations in human service organizations.

Although studies on interorganizational relations may create problems because of the many factors that need to be considered, many writers have indicated the utility of such studies. Hasenfeld and English (1977:540) stated:

> . . . It is useful to study interorganizational relationships in order to understand the condition that leads to the emergence of relationships between organizations, to become sensitive to consequences of those relationships on interorganizational structure, processes and clientele, and to become aware of the forms of linkages which effectively joint organizations to each other.

Medical training institutions and teaching hospitals are two types of human service organizations that are interlocked and dependent on each other. The medical schools depend on teaching hospitals for clinical facilities and access to the patients. On the other hand, the teaching hospitals depend on medical schools for specialized personnel and information on new forms of treatments. Therefore, the study of linkages between these two organizations appears useful and interesting in terms of organizational theory.

## MARRIAGE OF MEDICAL TRAINING INSTITUTIONS TO TEACHING HOSPITALS

The alliance of medical training institutions and teaching hospitals is indisputable and inseparable. The medical education programs require a theoretical phase at the school and a clinical phase at the teaching hospital. The teaching hospital with its clinics and its medical and allied health personnel provides essential services to the medical school. It provides not only access to patients' care but, access to clinical medical education and clinical research. Thus, a teaching hospital is an integral part of medical education. Derzon (1978:19( commented:

> . . . a teaching hospital has become the relief valve for the most cherished of all academic commodities, space, in an era of program growth unaccompanied by capital dollar. The affiliating hospital, often with more flexible funding, is a tempting mistress.

However, few medical training institutions have their own hospitals.

Normally medical schools rely heavily on teaching hospitals for clinical research facilities and for students' clinical practice.

Derzon (1978) stated that the marriage of medical schools to teaching hospitals has come about for several reasons. Derzon (1978:20) presented the following reasons:

> 1. There are inherent interdependences. It is, by and large a natural partnership of consenting adults. And for the schools, the only adults in town are the community hospitals.
> 2. There is usually sufficient commonality of goals of the two organizations.
> 3. There may be economic advantages to both organizations.
> 4. There is a traditional but important conviction of the hospital that optimal quality care can be achieved only through educational affiliation.
> 5. There is a desire for prestige and service role expansion.
> 6. There is fear that, left alone, the potential partner will become a threatening competitor.

Derzon (1978) argued that the success of these marriages "rests upon the degree of community hospital commitment and the flexibility and humanity which the school can bring to the partnership." Blishen (1969:24-44) in a review of medical education in Canada, illustrated the interdependency relationships between medical schools and affiliating hospitals. He also pointed out some of the difficulties that may arise in a relationship between a medical school and a teaching hospital. Blishen (1969) stated the divergent goals of these two organizations and the appointment of teaching staff in hospitals are some of the factors that may result in conflict between these organizations. Other difficulties associated with the relationships between medical schools and teaching hospitals may arise in (1) supervising students during clinical practice; (2) conducting research using hospital facilities; and (3) determining the effectiveness of clinical practice received by the students.

Derzon (1978:20) also argued that some of these problems may be reduced if both organizations recognize the following concepts:

> 1. The fortunes of the school and the hospital are completely interlocked and interdependent. One cannot succeed if the other fails. One cannot be great if the other is only good.
>
> 2. There must be recognition that the teaching hospital is first a hospital and secondly but not secondarily, a hospital for teaching. The teaching hospital is first and foremost a delicately balanced enterprise trying to improve the health of the patients for whom it has accepted responsibility.
>
> 3. There must be competent bilateral leadership that plays a reinforcing role for the two organizations.

The idea of competent bilateral leadership between teaching hospitals and medical schools has been advocated by several medical school educators and hospital administrators. Migue (1979) in a graduation speech to allied health professionals in Kenya stressed the importance of qualified and competent health professionals in the medical training programs, and for the care of patients. Migue (1979:63) stated:

> The Medical Training Centre cannot offer the expected quality of service if it cannot attract those people (clinical instructors and tutors) who are qualified and competent to teach other health professionals. . . . Experience in the field cannot be equated with the ability to teach in the classroom. The Medical Training Centre should be given the power to appoint staff who are positively interested in teaching and who can demonstrate the level of competence and experience in their professional field sufficiently high to be of benefit to their students.

Migue (1980) pointed out that medical educators and hospital administrators in Kenya have always tried to make the medical training programs effective by attempting to develop viable relationships between the Medical Training Centre and the hospitals. However, the available literature indicates there is no empirical research that has been done on the relationships between the Medical Training Centre and the hospitals. Also, the review of literature on interorganizational relationships in health service organizations revealed very few research studies. The studies by Andrews (1978); Schnee (1977) and Aiken and Hage (1968) are some of the few studies that have been done in the area of interorganizational relationships in health service organizations. The findings of these studies will be reviewed later in this chapter.

The intent of this section was to examine the reasons for interdependencies between medical schools and teaching hospitals. The literature also covered some problems that arise in relationships involving medical schools and teaching hospitals. Some concepts that are useful in reducing these problems were also identified. Although much has been discussed about the alliance of medical schools and teaching hospitals the available literature indicates very little research in this area.

## Approaches for Analyzing Interorganizational Relations

Writers such as Evan (1966), Thompson (1967), Levine and White (1961), Benson (1975), and Marrett (1971) have identified approaches for analyzing interorganizational relations. However, the available literature indicates that there is no universally accepted approach to the study of interorganizational relationships. Young (1979:23) stated that "the approach chosen by any particular investigator will depend upon the purpose of the investigator."

Marrett (1971:83-95) in a comprehensive review of literature on the major approaches in studying interorganizational relationships in health and social welfare organizations identified five major approaches. These approaches are shown in Table I.

The first approach focuses on intraorganizational properties according to Marrett (1971:87). Studies in this vein analyze the characteristics of a given organization affecting or affected by its interaction with other. According to Marrett (1971) no analysis of the interaction itself is required and the researcher does not need to know the specific organizations with which the central organization interacts with.

The second approach is called comparative properties and it requires that interacting organizations be compared on certain attributes; e.g. goal similarity, resource compatibility and compatibility of philosophies. The third approach, and the one which is central to this study, is termed "relational". Its focus is on the linkage mechanisms between the organizations. The fourth approach is called formal contextual properties and it focueses on, for example, on the character of the context in which a particular interaction occurs. The fifth approach is called non-organized contextual properties and this approach examines the environmental conditions and social processes that affect organizational relationships. Such factors may be economic, political, etc.

Although Marrett (1971) identified five approaches she pointed

Table I

Principal Approaches to Interorganizational Analysis and Representative Variables

| | APPROACHES | | | | |
|---|---|---|---|---|---|
| | Interorganizational Properties | Comparative Properties | Relational Properties | Formal Contextual Properties | Non-organized Contextual Properties |
| Variables | Complexity | Goal Similarity | Formality | Size of organizational "set" | Demographic structure |
| | Innovativeness | Resource Compatibility | Intensity | History of interlocking | Economic Conditions |
| | Openness of Communication | Compatibility of Philosophies | Reciprocity | | Concentration of resources |
| | Resource Accessibility | Similarity of structures | Standardization | Integration | Community Support |
| | Autonomy | | | | |

Source: Andrews (1978:25)

out that the five approaches are not mutually exclusive nor in conflict for the study of interorganizational relations. Marrett (1971:88) commented:

> In fact, they should be viewed as complementary approaches to the study of interorganizational relations. Barriers to or facilitators of cooperation may be derived from the structural characteristics of an organization, from differences between organizations, from the nature of the relationships, from existing organizational Activities, or from social processes. A total analysis of interorganizational relations requires a thorough understanding of the interplay between variables operating on all levels. But such an analysis is dependent upon the delineation of these variables.

Since one of the purposes of this study was to examine the nature of linkages between two departments at the Medical Training Centre and the provincial hospitals, Marrett's (1971) relational properties approach was considered appropriate.

## The Relational Properites Approach

Marrett (1971:89-95) proposed four linkage dimensions which were considered useful in this study. The four linkage dimensions are: (1) degree of formalization; (2) degree of intensity; (3) degree of reciprocity; and (4) degree of standardization. Negandhi (1975:63) stated that "with minor variations, the four dimensions have served as independent variables and building blocks in analyzing relations between organizations." Andrews (1978:35) presented the major linkage dimensions with explanation in Table II.

Formalization. Pugh et al. (1968:75) defined formatlization as the "extent to which rules, procedures, instructions and communications are written." Hall (1977:152-180) presented extensive theory and research findings on the concept of formalization. Hall (1977:178)

Table 11

Interorganizational Variables

| Linkage Dimension | Explanation |
|---|---|
| A. Formalization of the relationship<br>Measurable variables:<br>a) Formal agreement -- written ... informal<br>b) Coordination -- formal coordinator ... informal | A.<br>a) The degree to which the exchange is given official sanction -- Marrett (1971)<br>b) The extent to which an intermediary coordinates the relations -- Litwak and Hylton (1962) |
| B. Intensity of the relationships<br>Measurable variables:<br>a) Frequency of interaction -- high ... low<br>b) Relative resource commitment -- high ... low | B.<br>a) The kind and amount of involvement demanded -- Marrett (1971) and Hall (1972)<br>b) The resource investment (human, funds or services) required by the relationship -- Marrett (1971) |
| C. Reciprocity of the relationship<br>Measurable variables:<br>a) Resource reciprocity -- unilateral ... none<br>b) Definitional reciprocity -- unilateral ... none | C.<br>a) The degree to which resources are mutually exchanged -- Levine and White (1961)<br>b) The degree to which the terms of the interaction are mutually agreed -- Guetzkow (1966) |
| D. Procedural standardization -- high ... low | D. The extent to which procedures are clearly delineated -- Hall (1972) and Pugh et al. (1968) |

Modified from Andrews (1978:35)

defined "formalization" as ". . . the organizational technique of prescribing how, when, and by whom tasks are to be performed." Marrett (1971:89) and Negandhi (1975:63) contended that formalization is highly appropriate when applied to interorganizational analysis. Marrett (1971) identified formalization as having two subdimensions. These are: (1) agreement formalization: the extent to which the transactions between two organizations or groups is given official recognition; (2) structural formalization: the extent to which an intermediary coordinatres the relationships. The degree of formalization between organizations may vary from a formal written agreement to an informal relationship. Guetzkow (1966) hypothesized that informal interactions which have been found to be mutually satisfying may likely develop into formal arrangements.

Medical training institutions and teaching hospitals may develop formal or informal agreements during clinical medical education. The degree of formalization is normally determed by the benefits perceived by these two organizations.

The literature on the degree of formalization of relationships in human service organizations seem to be scarce. However, several research studies have been done that are relevant to this study. Litwak and Hylton (1962:395-420) conducted a case study of two types of coordinating agencies, community chests and social service exchange. From their study four conclusions relevant to this study were made. These were: (1) coordination existed and continued to grow where interdependence rested on some stable set of social relations; (2) high interdependency leads to no coordination; (3) low awareness leads to little coordination and (4) high awareness leads to high coordination. Litwak and Hylton (1962) found that highly formalized interactions between organizations can result in conflict between the organizations involved. They suggested that one approach to reduce the conflict between organizations is the development of coordinating mechanisms. Guetzkow (1966:32) stated:

> The degree of coordination which exists among organizations vary from minimal, tacit arrangements of co-existence to maximal highly explicit contractual arrangements of almost complete integration.

Andrews' (1978) findings regarding formalization seem to support Litwak's and Hylton's (1962) study wherein they stated "coordination existed and continued to grow where interdependence rested on some stable (formal) set of social relations. From these views Marrett (1971) concluded that the extent to which an intermediary coordinates the relationship is another indicator of formalization.

Intensity. This is the second linkage dimension that was identified by Marrett (1971). Young (1969:68) defined intensity as "the resource investment, both human and material, that an organization has to make in order that the interorganizational relationship between selected parts be viable." This linkage dimension ahs two subdimensions. These are: (1) size of resource investment: the magnitude of an organization's resource commitment to a relationship; and (2) frequency of interaction: the extent to which organizations interact with each other. According to Marrett (1971) the intensity of relationship may be high or low depending on the frequency of interaction and the resources that are invested by each organization. Some recent research studies (Osborn and Hunt, 1974:241; and Andrews, 1978:278) have shown that high intensity of interaction and resource commitment between organizations are associated significantly to measures of effectiveness.

Reciprocity of Relationship. The third interorganizational dimension identified by Marrett (1971) was the degree of reciprocity of the relationship. Andrews (1978:8) defined reciprocity as "the relative contribution of various parties in the relationship." According to Marrett (1971), Levine and White (1961), Van De Ven (1976), Guetzkow (1966), and Andrews (1978) reciprocity has two subdimensions. These are: (1) resource reciprocity, and (2) definitional reciprocity. Each of these subdimensions of reciprocity may be unilateral or bilateral. Resource reciprocity refers to the degree to which resources are mutually exchanged between the participating organizations while definitional reciprocity refers to the extent to which the terms of the relationships are mutually agreed upon (Andrews, 1978:32). The study by Levine and White (1961:583-601) that attempted to explore patterns of relationships between twenty-two community health and social welfare agencies using exchange as the conceptual framework seem to have relevance in this study. The elements of exchange were: (1) referrals, (2) labour, (3) resources, (4) written or verbal communications, and (5) joint activities. The indices used in this study are similar to Marrett's (1971) relative resource commitment indicators. The study by Stuart et al. (1977:220-223) which attempted to (1) distinguish empirically symmetrical and asymmetrical relationships between focal organization and its member organization set and (2) to explore variations in interactions which take place under symmetrical and asymmetrical conditions had findings relevant to this study too. The researchers used the exchange and power-dependency model to analyze interorganizational relations. Two hypotheses were developed from the exchange model and two hypotheses from the power-dependency model. From this study it was found that the exchange and power-dependency model could be incorporated into one framework through reciprocity indicators as indicated by Marrett (1971).

Standardization. Marrett (1971) identified two subdimensions of standardization dimensions: (1) unit standardization and (2) procedural standardization. Unit standardization refers to the fixedness of the units of exchange between organizations. Negandhi (1975:66) gave the heterogeneity of referrals received from or sent to another organization as an example of unit standardization. The specific number of medical students who may intern in a specific clinic in a teaching hospital is a good example of unit standardization between a medical school and a teaching hospital. Negandhi (1975) also argued that unit standardization may include the notion of liquidity, stability and universality, and the uniqueness of resources exchanged or shared between the organizations.

Research studies have shown some implications of lack of unit standardization between organizations. Litwak and Hylton (1962:395-420) on a case study of two types of coordinating agencies, community chests and social service indicated that "lack of unit standardization between organizations creates problems."

The second subdimension of standardization is procedural standardization or the extent to which rules and procedures for exchanging or sharing resources between organizations are clearly defined. In human service organizations and especially between medical schools and teaching hospitals, it is difficult to establish rules and procedures for exchange of resources. Most of the resources that are shared are specialized personnel, therapeutic equipment and ideas and information. It is difficult for the hospital or medical school staff to specify clearly the procedures for exchanging or sharing these resources. The procedures vary depending on the immediate needs of patients and students.

Some research studies have combined Marrett's (1971) dimensions of formalization and standardization into one heading: formalization (Andrews, 1978, Young, 1979; and Ratsoy, 1978:9). However, in this study procedural standardization was considered as a separate linkage dimension. The reason for this consideration was made on the basis of the administrative organization of the Medical Training Centre and the provincial hospitals in Kenya. The Medical Training Centre and the provincial hospitals are all under the Ministry of health. However, there are no defined ministerial procedures and rules for sharing or exchanging resources between these two organizations. The sharing occurs on an informal or written basis formulated by staff members of these two organizations. However, there are some disagreements on what should or should not be shared or exchanged. Negandhi (1975:66) and Litwak and Hylton (1962:395:420) indicated some problems that may arise from undefined procedures between organizations that are involved in joint programs. Litwak and Hylton (1962:395-420) indicated ". . . if there were unstandardized procedures between organizations there is greater probability of conflict between the organizations involved."

In general, the utility of Marrett's (1971) linkage dimensions has been shown in some research studies. The study by Andrews (1978) is one of the recent studies whose findings are relevant to this study. This study was concerned with interorganizational linkages and the effectiveness in programs for the preparation of allied health professionals in Canada. The study involved forty-eight faculty members and eighty-seven senior students in respiratory technology. The study used Marrett's (1971) linkage dimensions to investigate the linkages that existed in selected allied health programs in Alberta and Ontario. Several generalizations were developed from the study that seem to have utility in this study. These were:

(1) If a joint cooperative program is characterized by a high relative resource commitment and the resource commitment is symmetrical then the cooperative program is likely to be characterized by high formalization and definitional reciprocity.

(2) If one organization engaged in a joint cooperative program has a high relative resource commitment then the cooperative program is likely to be characterized by high formalization and structural standardization (coordination).

(3) If a joint cooperative program demonstrates an asymmetrical relative resource commitment then the cooperative program is also likely to demonstrate low definitional reciprocity.

(4) If a joint cooperative program is characterized by a symmetrical relative resource commitment and the resource exchange is low then the cooperative program is likely to be characterized by low formalization and structural standardization (coordination).

(5) If a joint cooperative program is characterized by a high degree of agreement formalization then the cooperative program is likely to be characterized by high structural and procedural standardization.

Andrews (1978:278) concluded that high formalization, standardization and relative resource commitment were associated with high measures of organizational effectiveness. Also, Andrews' (1978) finding regarding formalization supported Litwak and Hylton's (1962) conclusion wherein they found that "coordination existed and continued to grow where independence rested on some stable (formal) set of social relations.

The review of literature indicates that the degree of resource commitment and symmetry of the resources seem to be the determinants of the patterns of linkage dimensions (Levine and White, 1961; Andrews, 1978; and Negandhi, 1975). Also the review of literature on linkage dimensions indicate that some of the identified linkage variables are more interrelated than others. Marrett (1971) proposed two models that may exist between organizations that are involved in joint cooperative programs. Table III presents the two models proposed by Marrett (1971).

TABLE III

The Interrelationship of Interorganizational Dimensions

| Dimension | Model 1 | Model 2 |
|---|---|---|
| Formalization | | |
| Agreement formalization | Low | High |
| Structural formalization coordination | Low | ....[1] |
| Procedural standardization | Low - Medium | High |
| Intensity | | |
| Frequency of interaction | Low - Medium | ....[1] |
| Relative resource commitment | . . . . | High |
| Reciprocity | | |
| Resource reciprocity | Low | High |
| Definitional reciprocity | Low - Medium | High |

[1] Wide variation possible - no specific prediction made for the occurrence of the given variable.

Source: Andrews (1978:33).

According to Marrett (1971) cooperative programs should conform to the second model of interorganizational relationship. However, Marrett (1971), Andrews (1978) and Stuart et al. (1977) have argued that it is unlikely for organizations to conform to this model because they are hesitant to make commitments and the kind of investments required by such a model.

## SUMMARY

In this section some theory and research findings on interorganizational relations were presented. Some of the major topics that were examined were: the marriage of medical schools to teaching hospitals and the approaches for analyzing interorganizational relations. The relational properties approach was identified as the appropriate approach for this study. The four linkage dimensions were: (1) degree of formalization; (2) degree of intensity; (3) degree of reciprocity, and (4) degree of standardization. These four linkage dimensions were viewed as potentially useful and interesting in examining the linkages between the Medical Training Centre and the provincial hospitals in the departments of occupational therapy and physiotherapy in Kenya.

## ORGANIZATIONAL EFFECTIVENESS

In this section some theoretical and research findings related to organizational effectiveness are reviewed. More specifically the following are examined: (1) definitions of organizational effectiveness; (2) approaches to organizational effectiveness; (3) functions of goals for organizations and individuals; and (4) student evaluation of clinical practice.

## Definitions of Organizational Effectiveness

Hall (1977:1) stated that "of all the concepts which are important to organizational theory, effectiveness stands out as the most crucial."

The available literature indicates that different writers define organizational effectiveness differently (Steers, 1977; Spray, 1976; Dubin, 1976; Campbell, 1976; Mott, 1976; Hall, 1977; Goodman and Pennings, 1977; and Barnard, 1938). The following definitions indicate how different authors perceive organizational effectiveness. Organizational effectiveness is:

> . . . (the) ability of the organization, in either relative or absolute terms, to exploit its environment in the acquisition of scarce and valued resources (Yuchtman and Seashore, 1967:898).
>
> . . . the degree of goal achievement (Etzioni, 1964:8 and Price, 1968:8).
>
> . . . the ability of an organization to mobilize its centers of power for action-production and adaptation. Effective organizations are those that produce more and higher-quality outputs and adapt more effectively to environmental and internal problems than do other similar organizations (Mott, 1972:17).
>
> . . . an organization's capacity to acquire and utilize its scarce and valued resources as expeditiously as possible in the pursuit of its operative and operational goals (Steers, 1977:5).

Spray (1976:1) stated that the importance of assessing the performance of formal organizations was widely recognized in the early twentieth century overall the emphasis was placed on the determinants of organizational effectiveness or "efficiency". Other writers have indicated the lack of consensus on the meaning of organizational effectiveness. Scott (1977:64) commented:

> There is no agreement about what properties or dimensions are encompassed by the concept of effectiveness. There is disagreement about who does or should set the criteria to be employed in assessing effectiveness.

Further, the lack of consensus on criteria for assessing organizational effectiveness was illustrated by Steers (1977:47) whose analysis of seventeen models found one criterion, adaptability-flexibility, which was mentioned in more than half of the reported studies. Other evaluation criteria that have been included in most effectiveness studies either singly or in combination, include productivity, satisfaction, profitability, absence of strain, control over environment, employee retention, open communication, efficiency, development, growth and survival.

## Approaches to Organizational Effectiveness

The available literature indicated that there is no universally accepted approach for the study of organizational effectiveness. Cunningham (1977:463-469) indicated that the approach and criteria are selected "on the basis of an author's particular emphasis or specialty -- (and) on the organizational situation that needs to be addressed." However, two approaches have been identified by most writers for the study of organizational effectiveness. These are: (1) the goal approach that defines effectiveness in terms of goal attainment (Price, 1968:3) and (2) the system-resource approach that defines effectiveness in terms of the ability of the organization to exploit its environment in the acquisition of scarce resources

(Yuchtman and Seashore as in Hall, 1977:90).

Hall (1977:85-95) and Steers (1977:4) suggested that organizational effectiveness can best be examined by jointly considering a multidimensional approach that consisted of three related concepts. These are: (1) the system-resource approach; (2) the human behavior approach; and (3) the goal approach.

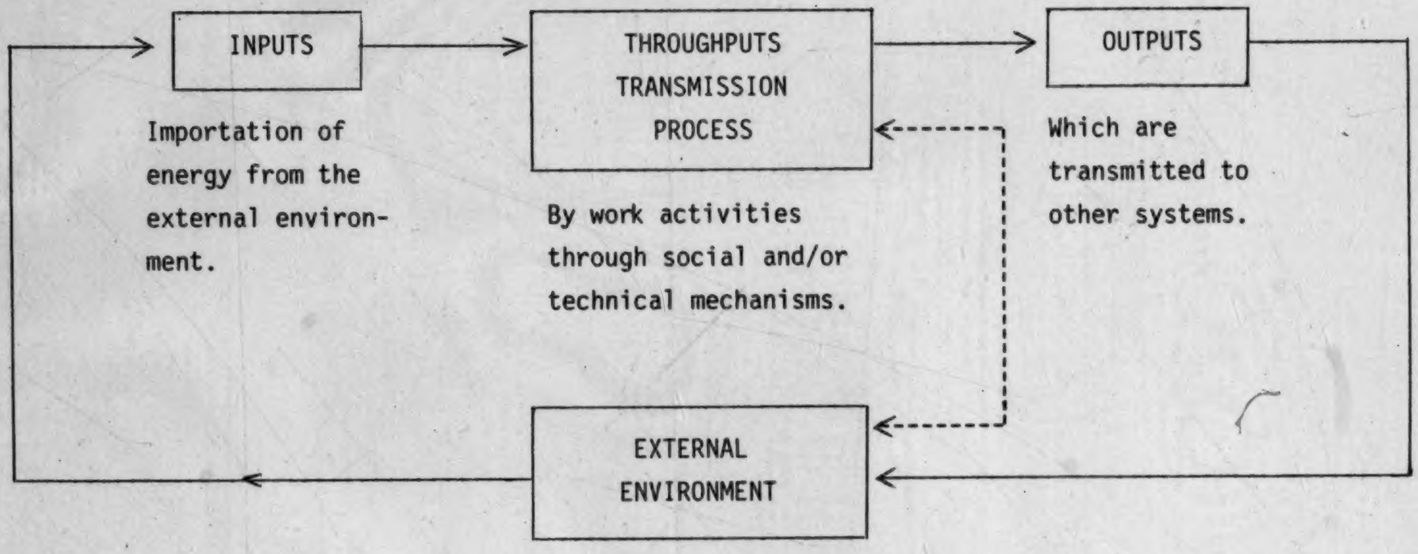
The System Resource Approach. This approach utilizes the notion of open systems. The open system approach is conceptualized as being composed of three basic components: (1) input, (2) throughputs, and (3) outputs. Figure I shows a basic paradigm for an open system model.

Several writers have indicated the utility of the system-resource approach in determining organizational effectiveness. Cunningham (1977:465-466) outlined some major characteristics of the system-resource approach:

> The system resource model defines the organization as a network of interrelated subsystems. The outputs of one subsystem may become the inputs of another subsystem; the organizational systems functions effectively to the degree that its subsystems are in harmony and are coordinated to work together. The central question in the use this model is: under given conditions, how close does the organization's allocation of resources approach an optimal distribution among the various subsystems?

According to Cunningham (1977) the organization strives to survive and to satisfy the needs of its components. In this context the needs refer to the requirements that subsystems must meet in order to survive. Therefore, if a researcher has to utilize this approach to determine organizational effectiveness he has to direct

Figure I


INPUTS
Importation of energy from the external environment.
THROUGHPUTS TRANSMISSION PROCESS
By work activities through social and/or technical mechanisms.
OUTPUTS
Which are transmitted to other systems.
EXTERNAL ENVIRONMENT

THE OPEN SYSTEM APPROACH

his attention towards the problem of relationships of structure, and of interdependence rather than the constant attitudes of objects (Katz and Kahn, 1966:18).

Many writers have used the open system approach in attempting to determine the effectiveness of organizations (Katz and Kahn, 1960; Miller, 1972; Evans, 1972; and Georgopoulos and Tannenbaum, 1957:535).

Georgopoulos and Tannenbaum (1957:535) were the first investigators who advanced the use of systems theory in the analysis of organizational effectiveness. They stated:

> It is preferable to look at the concept of organizational effectiveness from the point of view of the system itself -- of the total organization in question rather than from the stand point of some of its parts or of the larger society. Furthermore, proposed criteria should be system-relevant as well as applicable across organizations.

In this case, Georgopoulos and Tannenbaum (1957) were of the view that organizational effectiveness must contend not only with organizational ends but means as well. This idea is supported by Yuchtman and Seashore (1967:897) whose conceptualization of organizational effectiveness stressed the relationship between the organization and its environment.

The Human Behavior Approach. This approach emphasizes the role of employee behavior in achieving long term organizational goals. Many theorists have written about the interaction of individuals and organizations. Porter, Lawler and Hackman (1975:25-31) indicated the behavior of individuals and groups ultimately contribute to or detract from organizational goal attainment. Ratsoy (1978:7) and Green and

Organ (1976:95) indicated that ". . . individual activities cannot be coordinated toward organizational goals without role accuracy, clarity and consensus."

Role theory states that when expectations of an individual in an organization are inconsistent, he experiences stress, becomes dissatisfied, and performs less effectively. According to Ratsoy (1978:7-8) two variables related to role have been used in several studies of effectiveness. These variables are: (1) role conflict which was defined by Kahn et al. (1964:19) as ". . . the simultaneous occurrence of two (or more) sets of pressures such that compliance with one would make difficult compliance with the other": (2) role ambiguity which was also defined by Kahn et al. (1964:25) as ". . . the degree to which rquired information is available to a given organizational position." The various studies have consistently shown a strong relationship between each of these variables and indicators of effectiveness such as job satisfaction and confidence in the organization. The behaviour approach recognizes that the attainment of the organizational goals is to some degree dependent on individual behaviours in organizations.

Goals Approach. Several writers have indicated the utility of the goals approach in evaluationg organizational effectiveness (Cunningham, 1977; Steers, 1977; Campbell, 1976; and Ratsoy, 1978).

Campbell (1976:31) described the goals approach in the following terms:

> . . . the goal-centred view makes a reasonable assumption that the organization is in the hands of a rational set of decision makers who have in mind a set of goals which they wish to pursue. Further, these goals are few enough in number to be manageable and can be defined well enough to

> be understood. Given that goals can be thus identified, it should be possible to plan the best management strategies for attaining them. Within this orientation the way to assess organizational effectiveness would be to develop criterion measures to assess how well the goals are being achieved.

Steers (1977:176) stated that the use of the goal optimization approach of organizational effectiveness allows for explicit recognition that different organizations pursue different goals. He defined an organizational goal "as a desired state of affairs that organizations attempt to realize." From this perspective goals serve to answer where the organization is going. Also, this approach recognizes that all goals in an organization cannot be maximized. Thus, optimization may be taken as a vehicle by which multiple and conflicting goals are balanced. Yuchtman and Seashore (1976:891-903) and Stewart (1976:110) stated that there are two components of the goal approach. These are: (1) the prescribed goals, and (2) the desired goals. Steers (1977:24) also refers to these two components of goals in organizations. However, he refers to them as "operative" and "operational" goals. The operative goals represent the real intentions of an organization while the "operational" goals are those goals for which there are agreed upon criteria for evaluating the extent to which organizational activities contribute toward goal attainment. Perrow (1970:135) suggested five categories of organizational goals. These are: (1) societal goals, (2) output goals, (3) system goals, (4) product goals, and (5) derived goals. In this study the concept of goals was taken to mean operative goals as advocated by Steers (1977).

### Functions of Goals for Organizations and for Individuals

Many writers have stated the functions of goals in organizations

(Perrow, 1970: Stewart, 1976; Hall, 1972 and Steers, 1977). The functions of goals in organizations as outlined by Steers (1977:20-21) were considered useful in this study. These functions are:

(1) Goals focus attention or provide directions for managers in attempting to acquire and utilize resources.

(2) Goals often provide a rationale for working.

(3) Goals can serve as a standard of assessment of organizational effectiveness.

(4) Goals can assist the organization in acquiring needed human resources.

(5) Goals often constitute a source for legitimacy for an organization to justify its activities.

Also, Steers (1977:22) indicated that goals may be dysfunctional in organizations. This may happen when goals fail to provide directions for the administrators. The use of the goals approach in evaluating organizational effectiveness has been criticized by several evaluators of organizational effectiveness. Yuchtman and Seashore (1967:897) criticized the use of "prescribed and desired goals" in organizations. They argued that the "goals approach" uses the society not the organization as the frame of reference for evaluating organizational effectiveness.

Hall (1977) also indicated the problem of using the goals approach in determining organizational effectiveness. Hall (1977:86) stated:

> The difficulties in determining organizational goals and the multiple and conflicting nature of the goals of many organizations require that the goal approach be used with caution. When there is a single goal or a clear hierarchy of them, use of the goal approach is relatively simple, but when there is no clear hierarchy or there is conflict over goal priorities, use of the goal approach becomes more complicated.

However, Steers (1977:4) on examining the various approaches to evaluating effectiveness concluded that the majority of the approaches "rest ultimately on some measure of organizational goal attainment." He stated that "although a few models disclaim such a foundation and often employ unique terminology, they invariably return to the goal concept upon closer analysis".

Cunningham (1977) outlined the major features of the goal approach that appear useful in this study:

> The rational goal approach focuses on the organization's ability to achieve its goals. Evaluation criteria are derived from a definition of ends the organization is expected to achieve. These criteria are determined by various factors. One common practice is to use the formal statements of goals found in charters, manuals, and other documents. Informal but operative goals constitute other useful criteria. Still others may be derived from conceptualization of societal missions or functions of the organization.

An examination of this outline indicates that goals may be derived from several sources. In this study the goals were derived from the job descriptions for clinical instructors of the Medical Training Centre, the American Occupational Therapy Clinical Practice Guide book, and the American Occupational Therapy Educational Committee Report manual on clinical practice. Other goals were modified for this study from studies in the area of clinical teacher effectiveness. Some of the recent studies that utilized the goals approach were conducted by Irby (1978:808-815), Yonke (1979:86-90), Shahabi and Chawhan (1979:289-302) and Ratsoy (1978).

The study by Ratsoy (1978) involved respondents like the ones involved in this study. The study dealt with the effectiveness of the education practicum in the University of Alberta. The purpose of the study was to determine the extent to which forty-four goals of education practicum were achieved. The study involved cooperating teachers, faculty consultants and student teachers. From this study there were varying perceptions on the effectiveness of the education practicum.

## Student Evaluation of Clinical Practice

As indicated earlier, the evaluation of effectiveness of clinical practice in joint cooperative programs is a complex process that may involve many approaches and a variety of measures. The goal attainment approach was identified as a realistic approach in this study since the goals of clinical practice in the two allied health professions are clearly stated in each clinical setting. The use of student evaluation has been criticized in some studies. Anderson et al. (1975:345) indicated that many faculty members reject the idea that students can or will provide any meaningful contribution to evaluation. Nevertheless, other studies have indicated the utility of student evaluation of clinical effectiveness (Costin, Greenough and Menges, 1971; Bejar, 1975; Irby, 1978; Yonke, 1979; and Lancaster, Mendelson and Ross, 1979). Costin et al. (1971:511-535) in their study on student ratings of college teaching showed the reliability of student ratings over a variety of courses, instructors and students. Irby (1978:808-815) in a study of clinical teacher effectiveness in medicine revealed that residents, third and fourth year students can provide valid and reliable evaluation mechanisms for clinical teaching. Irby (1978) also indicated that the students' and residents' evaluation ratings were systematic. Yonke (1979:86-90) in a review of literature on clinical teaching found that student perceptions are more discriminating than even their teachers. Yonke (1979:87) stated:

> Students are more discriminating than their teachers in that they do not judge effective teaching on the basis of medical knowledge alone. They also recognize the attitude of the teacher towards patients and students, as well as the use of certain teaching techniques.

The study of Cotsmas and Kaiser (1963:749) on student evaluation of clinical teaching had similar results. Other studies in medicine have shown the use of students in evaluating clinical effectiveness (Byrne and Cohen, 1973; Miller, 1976; Reinchsman, 1964; and Elrick, 1967).

In education, some research studies have revealed that students may be a reliable data source for evaluating effectiveness. The study by Gmelch and Glasman (1977), Ratsoy et al. (1978) and Andrews (1978) are examples.

## CONCEPTUAL FRAMEWORK

Medical training institutions and teaching hospitals are two types of complex human service organizations whose activities are completely interlocked and interdependent according to Derzon (1978:19).

In this study, one of the purposes was to investigate the linkages that existed between two allied health professions in provincial hospitals and the Medical Training Centre in Kenya. In order to achieve this goal, four linkage dimensions and their indicators were identified from the review of literature. These were: (1) degree of formalization; (2) degree of intensity; (3) degree of reciprocity; and (4) degree of standardization. These four concepts were useful in formulating a conceptual framework for investigating relationships between the provincial general hospitals and the Medical Training Centre in two allied health professions.

Another concept that was considered useful in this study was effectiveness. Etzioni (1964:9) stated that "measuring effectiveness in organizations and efficiency raises several thorny problems". Hall (1977:1) noted that of all concepts which are important to organizational theory, effectiveness stands out as the most crucial. Since the other major purpose of this study was to determine the effectiveness of clinical practice in two allied health professions, some theory and research pertinent to organizational effectiveness were reviewed in this chapter. These included (1) definitions of organizational effectiveness, (2) approaches for determining organizational effectiveness, (3) functions of goals for organizations and for individuals, and (4) student evaluation of clinical practice. Three multidimensional approaches for evaluating organizational effectiveness were identified. These were: (1) the system resource approach, (2) the human behavior approach, and (3) the goals approach. However, the goals approach was found appropriate for this study.

Based upon the concepts and their interrelationships that were identified in this chapter, a conceptual framework in Figure II was developed. The open systems approach was found to have utility in formulating the conceptual framework that encompassed the linkage dimensions and the effectiveness of clinical practice in the two allied health professions. Mouzelis (1968:56) explained the value of a conceptual framework in a research study:

> It sets the theoretical boundaries; it discriminates between relevant and irrelevant properties; it indicates what is going to be examined and what is going to be considered as given.

From the open systems approach the linkage dimensions between the provincial general hospitals and the Medical Training Centre were viewed as resulting from the interactions that occur during students' clinical practice and clinical research activities.

As indicated in the conceptual framework the theoretical phases of the training program take place in the Medical Training Centre and the clinical phases of the training programs take place in the provincial general hospitals. From the open systems approach utilized in this study, both the theoretical and the clinical phase of the training programs are considered as two major processes or conversions. Normally, the students return to the Medical Training Centre for final theoretical and practical examinations after nine months of clinical practice. It was from this reasoning that the effectiveness of clinical practice was considered as a process and not an output in terms of the open systems approach.

The linkage dimensions between the Medical Training Centre and

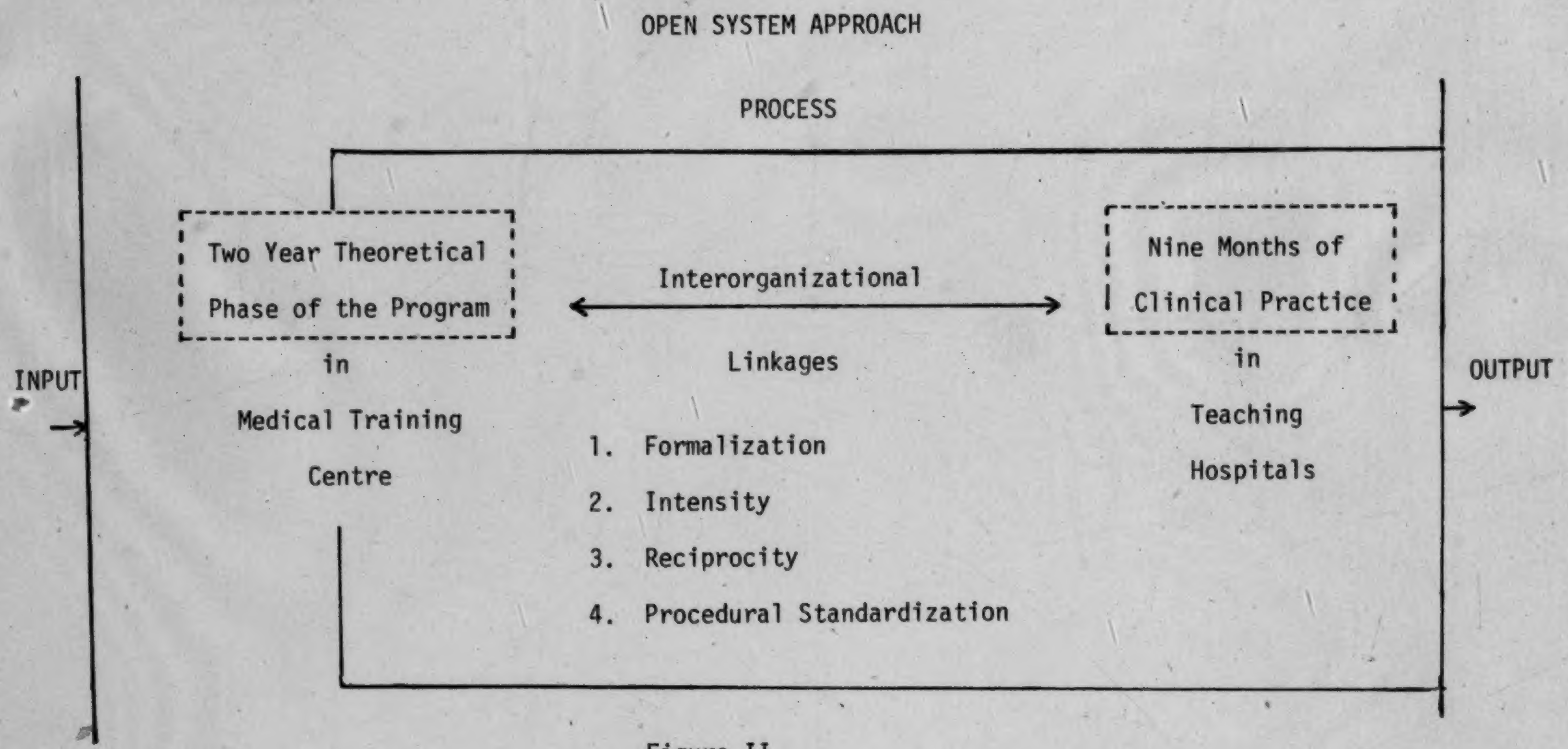

OPEN SYSTEM APPROACH
PROCESS
INPUT
Two Year Theoretical Phase of the Program
in
Medical Training Centre
Interorganizational
Linkages
1. Formalization
2. Intensity
3. Reciprocity
4. Procedural Standardization
Nine Months of Clinical Practice
in
Teaching Hospitals
OUTPUT

Figure II

Conceptual Framework of Interorganizational Linkages and the Effectiveness of Clinical Practice the provincial general hospitals were considered as independent variables while the effectiveness of clinical practice was considered as a dependent variable . Negandhi (1975:63) indicated that the four linkage dimensions have been used as independent variables and building blocks in analyzing relations between organizations.

## SUMMARY

This chapter presented the review of literature and the conceptual framework for the study. The chapter was divided into two major sections: (1) interorganizational relationships and (2) organizational effectiveness. In section one, the review of literature included (1) interorganizational relationships, an overview, (2) the marriage of medical training institutions to teaching hospitals, and (3) the approaches for analyzing interorganizational relations.

The intent of this section of the chapter was to examine the reasons for interdependencies between medical training institutions and teaching hospitals, and to examine some approaches for determining interorganizational relations in human service organizations.

The review of literature identified five major approaches for analyzing interorganizational relationships. However, only the relational properties approach was found appropriate for this study. Marrett (1971) proposed four linkage dimensions for examining relations between organizations. The four linkage dimensions were: (1) formalization, (2) intensity, (3) reciprocity, and (4) standardization. These linkage dimensions were found useful indicators for examining the relationships between the provincial general hospitals and the Medical Training Centre in Kenya.

In the second section of the chapter the review of literature on organizational effectiveness was presented. Specifically the review of literature examined the following areas: (1) definitions of organizational effectiveness, (2) approaches for analyzing organizational effectiveness, (3) functions of goals for organizations and for individuals, and (4) student evaluation of clincial practice.

The review of literature in this section revealed that there was no consensus on the definition of organizational effectiveness. Different writers define effectiveness differently. In this study, effectiveness was defined as the extent to which the provincial general hospitals provided student with opportunities to achieve the goals of clinical practice in two allied health professions. Furthermore, the review of literature revealed that there were several approaches for examining organizational effectiveness. However, there was no universally accepted approach. In this Chapter three approaches were reviewed. These were: (1) the resource systems approach, (2) the human behaviour approach, and (3) the goals approach. The latter approach was considered appropriate for this study for several reasons.

According to Steers (1977) and Campbell (1976) goals can serve as a standard of assessment of organizational effectiveness. Steers (1977:4) on examining the various approaches of evaluating effectiveness concluded that the majority of the approaches rest ultimately on some measure of organizational goal attainment. Also Steers (1977) indicates that although a few models disclaim such a foundation and often employ unique terminology, they invariably return to the goal concept upon closer analysis.

The review of literature on student evaluation of clinical practice revealed some reliability on the use of students' perceptions in determining organizational effectiveness. Yonke (1979:87) pointed out that, students are more discreiminating than their teachers in that they do not judge effectiveness on the basis of medical knowledge alone. Other research studies have indicated the value of students' evaluations in determining effectiveness in educational programs (Byrne and Cohen, 1973; Miller, 1976; Reinchsman, 1964; Elrick, 1967; Gmelch and Glasman, 1977; Andrews, 1978 and Ratsoy et al., 1978). Gmelch and Glasman (1977:45) stated that "students, the consumers of teaching, have a unique perspective from which to view effectiveness".

The last section in this Chapter presented a conceptual framework that was used for the study. The conceptual framework was formulated using Marrett's (1971) linkage dimensions as the independent variables and the effectiveness of clinical practice as the dependent variable. The open systems approach was found useful in formulating the conceptual framework that encompassed the linkage dimensions and the effectiveness of clinical practice in the two allied health professions.

# CHAPTER 3

# RESEARCH DESIGN AND METHODOLOGY

This chapter is divided into four sections: (1) research design, (2) development and validation of instruments, (3) reliability of instruments, and (4) research methodology. The section on research methodology includes the procedures followed to get permission to conduct the research, background information about administrative provinces of Kenya, provincial hospitals and their relationships with the Medical Training Centre. Also, the methodology for data collection and data analysis are presented in this section.

## RESEARCH DESIGN

### The Purpose of the Study

The purposes of the study were: (1) to describe the interorganizational linkages between the Medical Training Centre and the provincial hospitals in the departments of occupational therapy and physiotherapy in Kenya; (2) to determine the effectiveness of clinical practice in the provincial hospitals (3) to determine the ideal importance of broad goal statements of clinical practice; and (4) to examine the relationships between the forms of linkages and the effectiveness of the clinical practice.

### Research Variables

Linkage Variables. There were four linkage variables. The linkage variables were based on Marrett's (1971:89) dimensions of interorganizational relations. The variables were: (1) formalization, (2) intensity, (3) reciprocity, and (4) standardization.

Effectiveness Variables. The seven broad goal statements of clinical practice in occupational therapy and physiotherapy programs were the primary effectiveness variables. However, the seventy skills pertaining to the seven broad goal statements were considered as secondary effectiveness variables.

### The Sample

The sample for the study consisted of two major groups. The first group consisted of occupational therapists and physiotherapists who were working in the provincial general hospitals. The second group consisted of third year occupational therapy and physiotherapy students who had completed clinical practice in the provincial hospitals. The total number of respondents for the study was one hundred and fifty-eight.

## DEVELOPMENT AND VALIDATION OF INSTRUMENTS

Two instruments were required for data collection in this study. The two instruments were: (1) a questionnaire and (2) a semi-structured interview guide in appendice A and B respectively.

### The Questionnaire

A three-part questionnaire was used for the study. Some items in the questionnaire were developed and others were modified from previous instruments by the researcher on the following basis:

1. A review of literature on interorganizational relations and organizational effectiveness was undertaken.
2. Segments of previous instruments used by Andrews (1978), Irby (1978), and Ratsoy (1978), were used in the design of the questionnaire.
3. Two clinical instructors in the department of occupational therapy and two clinical instructors in the department of physiotherapy at the University of Alberta hospital, and two faculty members in the faculty of Rehabilitation Medicine at the University of Alberta were consulted for some feedback on the content and face validity of the questionnaire.

Part A of the Questionnaire -- Personal Information Variables. This part of the questionnaire contained items designed to provide personal information of the respondents. Eight variables were considered important. These were: (1) sex, (2) age, (3) marital status, (4) job group, (5) hospital, (6) position, (7) educational attainment, and (8) years of experience as a therapist.

Part B of the Questionnaire -- Effectiveness of Clinical Practice and Ideal Importance of Broad Goal Statements of Clinical Practice. This part of the questionnaire was developed to measure the effectiveness of clinical practice and to determine the ideal importance of broad goal statements of clinical practice as perceived by the respondents in each provincial hospital.

Effectiveness of clinical practice was based on the respondents' perceptions of the achievement of seven broad goal statements of clinical practice in provincial hospitals. The seven broad goal statements were derived from several sources: (1) the revised job descriptions of clinical instructors in the departments of occupational therapy in Kenya (1979), (2) the American Occupational Therapy Clinical Practice Guide Book (1978), and (3) the American Occupational Therapy and Physiotherapy Education Committee Report on Clinical Practice (1978). The seven broad goal statements were: (1) evaluation of patients, (2) formulation of aims of treatment and carrying out treatment, (3) broadening medical terminology and knowledge, (4) developing communication skills, (5) using self as a therapeutic medium, (6) performing administrative functions, and (7) developing professional attitudes.

A five-point Likert-type scale was used to determine the effectiveness of clinical practice. The rating scale responses used were: 1 = very good, 2 = good, 3 = fair, 4 = poor, and 5 = very poor. The respondents were asked to rate the extent to which the hospital provided students with the opportunities to achieve the seven goals of clinical practice in their hospital.

Ideal importance of broad goal statements of clinical practice - To determine the ideal importance of the seven broad goal statements a five-point scale was used. The rating scale responses used were: 1 = very important, 2 = important, 3 = moderately important, 4 = of little importance, and 5 = not important. The respondents were asked to rate each goal on the above scale.

Part C of the Questionnaire -- Linkage Dimensions. This part of the questionnaire had thirty-one items that were intended to provide data on linkage activities in the departments of occupational therapy and physiotherapy in Provincial hospitals. The items were modified from previous instruments used by Andrews (1978). The following number of items were modified for use in this study: (1) six items for the degree of formalization, (2) twelve items for the degree of intensity, (3) nine items for the degree of reciprocity, and (4) four items for the degree of procedural standardization.

## Validation of the Questionnaire

In this study the content and face validity of the questionnaire were considered important. In order to determine the validity the following steps were undertaken:

1. All the questions and items in the questionnaires were developed directly from the literature pertaining to the study. Thus, the sources of goals of clinical practice and the modification of items for linkage dimensions from previous instruments should have established a preliminary level of content validity.

2. In order to establish further content validity the questionnaire was presented to rehabilitation team members. The rehabilitation team members included two clinical instructors, in both occupational therapy and physiotherapy from the University of Alberta hospital and two faculty members in the faculty of Rehabilitation Medicine at the University of Alberta. These respondents were familiar with linkage activities between a medical school and a teaching hospital and they were familiar with the goals of clinical practice in occupational therapy and physiotherapy departments. On the questionnaire the items that were supposed to measure linkage

activities and effectiveness variables were identified. The respondents were asked to examine each item in detail and then, to identify items that were ambiguous and irrelevant. Also, the respondents were requested to add comments and suggestions.

3. The questionnaire was also presented to three faculty members in the Department of Educational Administration, and two experts in English language. The three faculty members in the department of Educational Administration who were familiar with the study since they were members of the thesis supervisory committee. These respondents were requested to examine the items and then to identify the ambiguous ones and to offer their comments and suggestions.

On the basis of the comments and suggestions from each of these people, revisions to the initial questionnaire were undertaken before the final questionnaire for the study was developed.

## The Pilot Study

Borg and Gall (1979:71) indicate:

> In many pilot studies it is possible to get feedback from the research subjects and other persons involved that leads to important improvements in the main study.

The purpose of the pilot study was to get some feedback on the content and face validity of the questionnaire and to determine the reliability of the instrument. Dunnette (1966:131) recommends that subjects in a validation study should bear a close resemblance to the kinds of persons who will be taking the test in the future.

In this study four clinical instructors in occupational therapy and physiotherapy departments from the University Hospital in Alberta, two faculty members, and twenty-three occupational therapy students in Rehabilitation Medicine from the University of Alberta were involved in the pilot study. These respondents were considered similar to the respondents who would eventually be involved in the study in Kenya. The respondents in the pilot study were contacted by the researcher and they all agreed to be involved. The questionnaires were delivered to the respondents who were then instructed how to respond to the items. They were also requested to identify items that were unclear and to offer comments and suggestions on the wording and organization.

A total of thirty-four questionnaires were distributed and twenty-three usable questionnaires were returned. The pilot study was conducted in April 1980.

A detailed examination of the respondents' comments and suggestions necessitated revisions to unclear items before the final questionnaire was developed. On the basis of the procedures undertaken and the revisions made it was decided that the questionnaire was a valid instrument for the study.

## The Interview Guide

In this study a semi-structured interview guide was used to gather in-depth information on linkage activities and on the effectiveness of clinical practice in provincial hospitals. The development of the interview guide was based on the following:

1. A review of literature on interorganizational relations and the

effectiveness of clinical practice in occupational therapy and physiotherapy.

2. Some items that were used in previous instruments by Irby (1978) on "clinical teacher effectiveness in physical medicine" and Bejar (1971) on "student evaluations of clinical practice in medicine" were modified for use in the interview guide.

3. Consultation with some clinical instructors and tutors in occupational therapy and physiotherapy in Kenya on how to determine the effectiveness of clinical practice in the hospitals was undertaken.

The interview guide had seventeen questions of which some were structured and others were non-structured. All the questions were asked in the same order they appear in Appendix B during the interviews. The responses were edited after each interview.

## Validation of the Interview Guide

In order to determine content and face validity of the interview guide several steps were undertaken. The proposed guide was presented to four physiotherapists and three occupational therapists in Kenyatta National hospital in Kenya. These seven respondents were requested to criticize or clarify the items of the interview guide. Specifically, the respondents were asked to determine the extent to which the items represented the content that they were designed to measure, and to determine whether the items appeared to cover the relevant content, namely linkage activities and effectiveness of clinical practice.

An examination of the comments and suggestions provided by the seven respondents revealed some questions to be too long or unclear.

Other comments indicated unnecessary wording on some items.

All the revisions were made before the final interview guide (Appendix B) was developed. Thus, the content and face validity of the interview guide were established.

## RELIABILITY OF THE QUESTIONNAIRE

In this study the coefficient of internal consistency and the alpha coefficient were used to determine the reliability of the questionnaire.

### Coefficient of Internal Consistency

According to Borg and Gall (1979:219) this type of reliability is also called split-half or subdivided test reliability. In order to determine the coefficient of internal consistency of the questionnaire used in this study, the data obtained from the twenty-three questionnaires that were returned in the pilot study were used. The test was split into two subtests by placing all the odd-numbered items in one subtest and all the even-numbered items in another subtest. The scores of the two subtests were then computed for each respondent in the pilot study. The two sets of scores were correlated and a positive correlation coefficient of $r = 0.98$ was obtained. However, the obtained correlation representated the reliability coefficient of only half the test, and since reliability is related to the entire test the Spearman-Brown prophency formula was used to determine the reliability of the entire test. The reliability coefficient obtained for the entire test was $r = 0.98$ which indicated the questionnaire was a reliable instrument to be used in the study.

Alpha Coefficient. According to Cronbach (1970:160) the alpha coefficient tells how well scores obtained by a single administration of the test represent a universal score. The alpha coefficient obtained for the questionnaire used in this study was 0.99 which indicated the questionnaire was a reliable instrument for use in the study.

## RESEARCH METHODOLOGY

Permission to conduct the research was obtained from the Office of the President, Cabinet Affairs. The researcher wrote a letter (Appendix C) through the Senior Deputy Director of Medical Services who was also the principal of the Medical Training Centre in Kenya.

While awaiting permission to conduct the study, contact with the occupational therapy and physiotherapy department heads in Kenyatta National Hospital was made in order to obtain a list of all the names of therapists who were working in provincial hospitals. Also, the heads of departments of occupational therapy and physiotherapy in the Medical Training Centre were requested to provide a list of names of tutors and third year students in their departments. A list of all the respondents was compiled and in late June, 1980 a letter (Appendix D) outlining the purpose of the study and its significance in developing, planning and organizing clinical practice in both occupational therapy and physiotherapy programs was sent to each respondent who was chosen for this study.

### Background Information

The background information will cover briefly the geographical position of Kenya, the administrative provinces of Kenya, the provincial general hospitals, and their relationships with the Medical Training Centre.

Kenya is one of the East African countries. It is 224,960 square miles in area and has a population of approximately fifteen million people. The country lies between latitude 4°N and 4°S, and between longitude 36°E and 40°E. Kenya is divided into eight administrative provinces and each province has a provincial general hospital. The provinces are divided into districts and there are forty-one districts. Each district has its own hospital. The provincial general hospitals and the district hospitals are all under the Ministry of Health. Figure III shows the eight administrative provinces, the geographical position of Kenya and the location of the provincial hospitals.

In the Nairobi area there were two hospitals that were considered for this study. These were the Kenyatta National hospital and the Mathari hospital. The two hospitals are referral and teaching hospitals. In each provincial hospital there are departments of occupational therapy and physiotherapy.

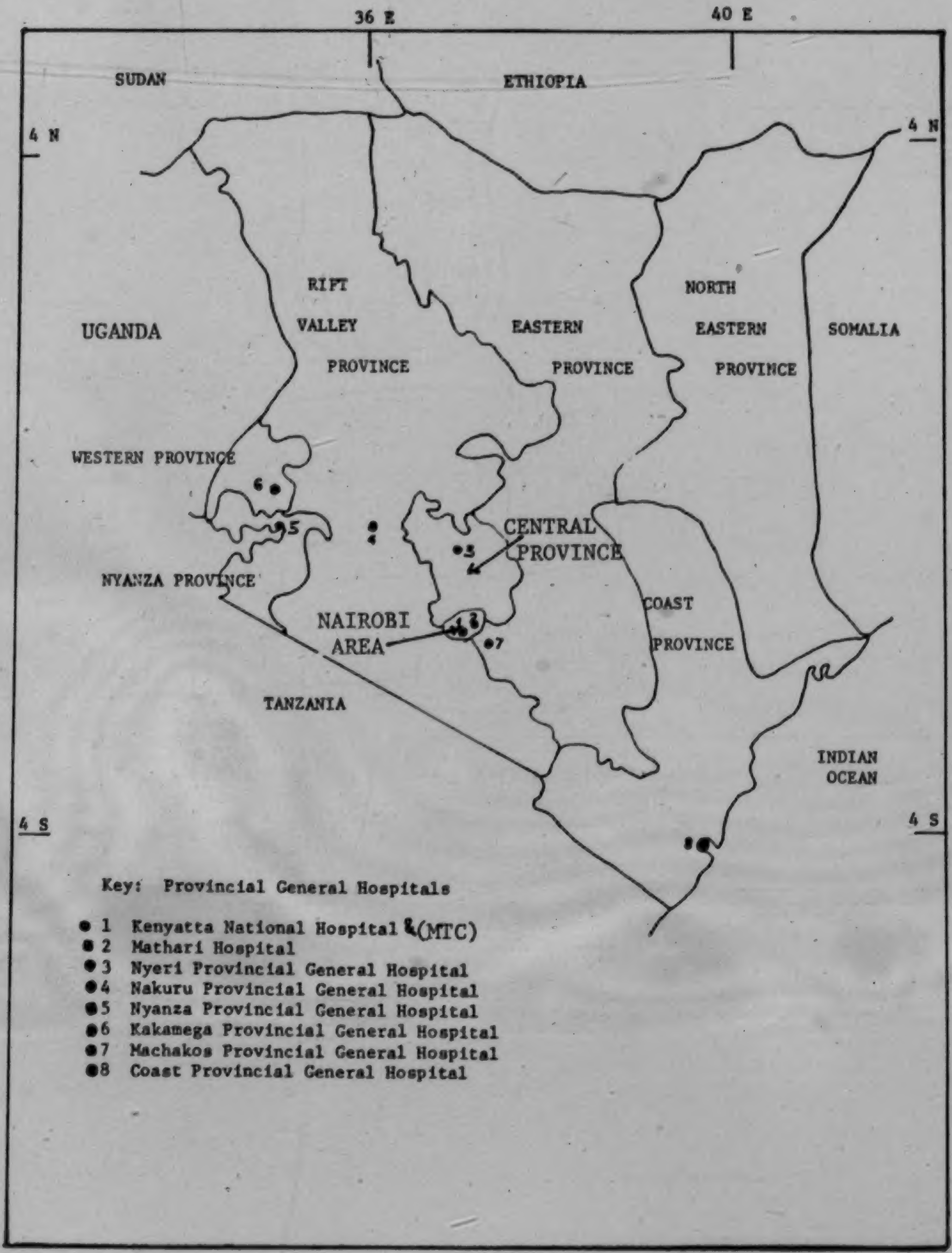
As indicated earlier in Chapter 1 the Kenyatta National hospital, the provincial hospitals and the district hospitals provide clinical medical education and clinical research to students and allied health professionals from the Medical Training Centre.

The Medical Training Centre is a government institution that is responsible for training all allied health professionals in Kenya. Both it and the provincial hospitals are under the Ministry of Health which provides their budget and all their employees.

The Medical Training Centre has nine faculties of allied health professions. Some faculties have several departments while others have

Figure III

KENYA ADMINISTRATIVE PROVINCES AND THE LOCATION OF PROVINCIAL GENERAL HOSPITALS


36 E
40 E
4 N
4 N
4 S
4 S
SUDAN
ETHIOPIA
UGANDA
SOMALIA
TANZANIA
INDIAN OCEAN
RIFT VALLEY PROVINCE
EASTERN PROVINCE
NORTH EASTERN PROVINCE
WESTERN PROVINCE
NYANZA PROVINCE
CENTRAL PROVINCE
NAIROBI AREA
COAST PROVINCE
1
2
3
4
5
6
7
8
Key: Provincial General Hospitals
● 1 Kenyatta National Hospital & (MTC)
● 2 Mathari Hospital
● 3 Nyeri Provincial General Hospital
● 4 Nakuru Provincial General Hospital
● 5 Nyanza Provincial General Hospital
● 6 Kakamega Provincial General Hospital
● 7 Machakos Provincial General Hospital
● 8 Coast Provincial General Hospital

only two. The nine faculties are: (1) clinical medicine, (2) nursing, (3) pharmaceutical technology, (4) radiography, (5) environmental science, (6) educational development, training and research, (7) medical laboratory, (8) occupational therapy, and (9) physical medicine. The Faculty of Physical Medicine had four departments before the faculty of occupational therapy was established in 1980. The four were: (1) dental technology, (2) occupational therapy, (3) physiotherapy, and (4) orthopaedic technology.

The faculty of occupational therapy and the department of physiotherapy have a lot in common both at the Medical Training Centre and in the hospitals. In hospitals, the physiotherapists and the occupational therapists both deal with the same type of patients, and they use similar treatment techniques and evaluation procedures.

At the Medical Training Centre both the occupational therapy and physiotherapy students take similar theoretical courses including anatomy, physiology, kinesiology, medicine, orthopaedics, psychology and pathology. In some cases, both occupational therapy and physiotherapy students are taught together by occupational therapy tutors.

The occupational therapy and physiotherapy students do their clinical practice in provincial and some district hospitals. However, the majority of the students in both professions do their clinical practice in provincial hospitals. The latter have better clinical facilities compared with the district hospitals. Some of the facilities include (1) therapeutic equipment and materials, (2) patients with different diagnoses, and (3) professional and experienced personnel to supervise the students. During clinical practice the occupational therapy and physiotherapy students may treat the same patients and they may monitor the progress of patients as a team.

Normally, the occupational therapy and physiotherapy students do their clinical practice for approximately one year. During this period they are given opportunities to work in different clinical settings in the provincial general hospitals and some district hospitals. They are supervised by qualified therapists and tutors from the Medical Training Centre visit them occasionally.

After the completion of the clinical practice the students return to the Medical Training Centre to prepare for the final theoretical and practical examinations in their respective disciplines. These are prepared by the tutors. However, some qualified experienced therapists from the hospitals are invited as external examiners for practical examinations.

## Data Collection

In early July, 1980 the questionnaires were coded to enable the non-respondents to be identified. Respondents' names and their corresponding numbers were kept on file. During late July, 1980 the questionnaires and letters of transmittal (Appendix E) were sent to all the therapists chosen for the study. Those sent to respondents in provincial general hospitals, outside the Nairobi area were mailed in large envelopes. The questionnaires for respondents in the Kenyatta National hospital and in the Mathari hospital were delivered by hand. All the respondents were requested to return the completed questionnaires to the Medical Training Centre.

Visits to the provincial hospitals between 11th to 28th August, 1980 were made in order to conduct the interviews with department heads in occupational therapy and physiotherapy. Twelve such interviews were conducted and each took approximately forty-five minutes. They were conducted privately and the information gathered was compiled and analyzed soon after.

During the visits, the respondents were requested to return their completed questionnaires.

## Data Analysis

Data from the completed questionnaires were coded on computer coding sheets and then keypunched onto computer cards for analysis. Since the questionnaire had three parts the analysis of the data is presented separately.

Part A -- Analysis of Data on Personal Information Variables. The analysis of data in this part of the questionnaire involved the determination of frequencies and percentages of occupational therapy and physiotherapy respondents. The frequencies and percentages were based on eight demographic variables.

Part B -- Analysis of Data on Respondents' Perceptions of Effectiveness of Clinical Practice and Ideal Importance of Broad Goal Statements. Descriptive statistics and tests of significance were used for this part of the questionnaire. The means, standard deviations and rank orders for effectiveness variables and for ideal importance of broad goal statements were computed using the Statistical Package for Social Sciences.

One-way analysis of variance and '*t*'-tests were used to test for significant differences. In order to use the 'F' and 't' tests in this study the following assumptions were made.

(1) The scores in the population were normally distributed.

(2) The population variances of the comparison groups were approximately equal.

One-way analysis was used when more than two group means were compared and the '*t*' test was used when two group means were compared. Following the analysis of variance, where the F ratio was statistically significant at the 0.05 level, the Scheffé Multiple Comparison of Means was used to determine which group means differed significantly from one another.

Part C -- Analysis of Data on Linkage Dimensions. Thirty-one items were used to measure the linkage dimensions. In order to develop a linkage profile for occupational therapy and physiotherapy departments in each provincial hospital, a coding system that was proposed by Marrett (1971:95) was used. This coding system was useful in summarizing rating responses for the items used to measure the four linkage dimensions.

The coding system for each linkage indicator is presented below:

| Linkage Indicators | Coding System |
|---|---|
| 1. Formalization | |
| Agreement formalization | Formal agreement or Informal agreement |
| Formal co-ordination | Formal co-ordination or Informal co-ordination |
| 2. Intensity | |
| Resource Commitment | Low - Medium - High |
| Frequency of interaction | Low - Medium - High |

| | |
|---|---|
| 3. Reciprocity | |
| Resource Reciprocity | Bilateral or Unilateral |
| Definitional Reciprocity | Mutual agreement -- Unilateral decision |
| 4. Standardization | |
| Procedural standardization | Low - High |

Analysis of Data from Interviews. The purpose of the interviews in this study was to verify and to provide in-depth information on linkage activities and the effectiveness of clinical practice in each provincial hospital. According to Borg and Gall (1979:313) a semi-structured interview "provides a desirable combination of objectivity and depth and often permits gathering valuable data that could not be successfully obtained by any other approach."

A content analysis of information gathered in interviews was done and the data obtained were incorporated into the discussions of the findings.

### Factor Analysis on Effectiveness Items

A varimax rotated exploratory factor analysis was used to reexamine the effectiveness variables and if possible to identify the variables that cluster together. In Chapter 4 the findings of the exploratory factor analysis are presented in detail.

## SUMMARY

This chapter has presented the research design and the methodology for the study. It has been divided into four sections: (1) research design, (2) development and validation of instruments, (3) reliability of the questionnaire, and (4) research methodology that included some background information about the administrative provinces of Kenya and the provincial hospitals.

In the first section of the chapter, the purpose of the study, the linkage and effectiveness variables, the respondents for the study who included occupational therapists, physiotherapists and the third year occupational therapy and physiotherapy students who had worked in provincial hospitals have been described.

In section two of the chapter the procedures followed in the development and validation of the two instruments used in the study were described. In section three, the procedures that were used to determine the reliability of the questionnaire were presented. The last section of this chapter dealt with research methodology. In this section some background information on the administrative provinces and provincial hospitals in Kenya was presented. Also, procedures for data collection and data analysis for the study were presented in this section of the chapter.

# CHAPTER 4

# QUESTIONNAIRE RATE OF RETURNS, ANALYSIS OF DATA ON DEMOGRAPHIC VARIABLES AND EXPLORATORY FACTOR ANALYSIS OF EFFECTIVENESS VARIABLES

The purpose of this chapter is to present data on questionnaire rate of returns, analysis of data on demographic variables and an exploratory factor analysis of effectiveness variables. The chapter is divided into three sections: (1) the questionnaire rate of returns; (2) characteristics of respondents which include physiotherapy and occupational therapy respondents and (3) an exploratory factor analysis of effectiveness variables.

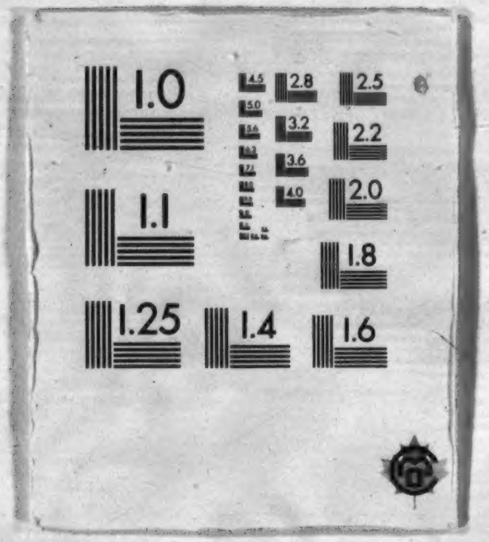
## QUESTIONNAIRE RATE OF RETURNS

A high percentage return of questionnaires in survey research is very important. However, Kerlinger (1973:414) notes that:

> Responses to mail questionnaires are generally poor. Returns of less than forty or fifty percent are common. High percentages are rare. At best, the researcher must contend himself with returns as low as fifty or sixty percent.

In this study several methods were used to maximize the return of questionnaires. The use of a letter of transmittal to each respondent was one major technique. Borg and Gall (1979:302) state: ". . . perhaps the most important single factor in determining the percentage of responses obtained is the letter of transmittal used . . .".

2


1.0
4.5
5.0
5.6
6.3
7.1
2.8
3.2
3.6
4.0
2.5
2.2
2.0
1.1
1.8
1.25
1.4
1.6

In this study a letter of transmittal that outlined the purpose and the importance of the study, the importance of the respondents and the need for reasonable but specific time to return the questionnaire was used. Borg and Gall (1979) also indicated the colour of the paper on which the questionnaire is printed on influences the rate of returns. In this study Part A of the questionnaire was printed on pink paper, Part B on blue and Part C on green papers.

Table 4.1 and Table 4.2 present the rate of questionnaire returns by occupational therapy and physiotherapy respondents. In these two tables the number of questionnaires distributed, returned, not returned and the percentage used are shown.

Table 4.1

Distribution and Returns of Questionnaires by Occupational Therapy Respondents

| Respondent | Total Distributed | Number of Returns (Usable) | Number of Non-returns | Percentage of Usable Returns |
|---|---|---|---|---|
| Occupational therapists | 60 | 42 | 18 | 70 |
| Occupational therapy students | 25 | 23 | 2 | 90 |
| Occupational therapy tutors | 8 | 6 | 2 | 75 |
| Total | 91 | 71 | 22 | 78.02 |

The data in Table 4.1 indicate that ninety one questionnaires were distributed and seventy-one usable questionnaires were returned. The occupational therapy students had the highest rate of returns among the occupational therapy respondents. Altogether, seventy-one occupational therapy respondents returned the questionnaires and this represented 78.02 percent of the total number distributed.

Table 4.2

Distribution and Return of Questionnaires by Physiotherapy Respondents

| Respondent | Total Distributed | Number of Returns (Usable) | Number of Non-Returns | Percentage of Usable Returns |
|---|---|---|---|---|
| Physiotherapists | 57 | 47 | 10 | 82.46 |
| Physiotherapy students | 47 | 34 | 13 | 72.34 |
| Physiotherapy tutors | 10 | 6 | 4 | 60 |
| Total | 114 | 87 | 27 | 76.32 |

The data presented in Table 4.2 indicate that 114 questionnaires were distributed and out of that, 87 were returned. The total percentage of usable returned questionnaires by the physiotherapy respondents was 76.32 percent. The tutors had the lowest percentage of return among the physiotherapy respondents.

## CHARACTERISTICS OF RESPONDENTS

In this section of the chapter the personal characteristics of occupational therapy and physiotherapy respondents will be presented. The personal characteristics were based on eight demographic variables.

### Personal Characteristics of Occupational Therapy Respondents

Sex. The majority of the occupational therapy respondents, 66.2 percent (47) were males and 33.8 percent (27) were females.

### Distribution of Occupational Therapy Respondents in Hospitals

As indicated in Table 4.3 approximately 41 percent (29) of the respondents had worked in Kenyatta National hospital and about 29 percent (20) of the respondents had worked in Mathari hospital. The remaining 30 percent (22) were distributed in other provincial general hospitals.

Table 4.3

Frequency and Percentage Distribution of Occupational Therapy Respondents Based on Provincial Hospitals
(N = 71)

| Hospital | Frequency | Percentage |
|---|---|---|
| Kenyatta National Hospital | 29 | 40.85 |
| Mathari Hospital | 20 | 28.17 |
| Nyeri Provincial General Hospital | 3 | 4.23 |
| Nakuru Provincial General Hospital | 4 | 5.63 |
| Nyanza Provincial General Hospital | 5 | 7.04 |
| Machakos Provincial General Hospital | 7 | 9.86 |
| Coast Provincial General Hospital | 1 | 1.41 |
| Kakamega Provincial General Hospital | 2 | 2.82 |
| Total | 71 | 100.00 |

Age. The majority of the occupational therapy respondents 45.1 percent (32) were between 21 - 25 years old. The data presented in Table 4.4 indicate 31 percent (21) of the respondents were between 26 - 30 years old and about 17 percent (12) were between 31 - 35 years old.

Marital Status. Approximately 48 percent (34) of the occupational therapy respondents were married and 52.1 percent (37) were single.

Job Group. As indicated in Table 4.5 forty occupational therapists were in Job Group G and those constituted 56.3 percent of the respondents. There were eight occupational therapists who were above Job Group G and these constituted approximately 7 percent of the total respondents in occupational therapy. The remaining twenty-three respondents were students.

Table 4.4

Frequency and Percentage Distribution of Occupational Therapy Respondents Based on Age
(N = 71)

| Age | Frequency | Percentage |
|---|---|---|
| 20 years or less | 4 | 5.63 |
| 21 - 25 | 32 | 45.07 |
| 26 - 30 | 22 | 30.99 |
| 31 - 35 | 12 | 16.90 |
| 36 - 40 | 1 | 1.41 |
| Total | 71 | 100.00 |

Table 4.5

Frequency and Percentage Distribution of Occupational Therapy Respondents Based on Job Group
(N = 71)

| Job Group | Frequency | Percentage |
|---|---|---|
| Job Group G | 40 | 56.43 |
| Job Group H | 4 | 5.63 |
| Job Group J | 3 | 4.23 |
| Job Group K | 1 | 1.41 |
| (Students) | 23 | 32.37 |
| Total | 71 | 100.00 |

Position. There were six categories of positions that were considered in the study. Table 4.6 presents the data based on these six positions. Table 4.6 indicated about 34 percent (24) of the respondents were staff therapists, about 16 percent (11) were department heads in hospitals and about 33 percent (23) were students.

Table 4.6

Frequency and Percentage Distribution of Occupational Therapy Respondents Based on Position
(N = 71)

| Position | Frequency | Percentage |
|---|---|---|
| Staff therapist | 24 | 33.80 |
| Clinical instructor | 6 | 8.45 |
| Department head at MTC | 1 | 1.41 |
| Department head in hospital | 11 | 15.49 |
| Tutor in MTC | 6 | 8.45 |
| (Student) | 23 | 32.39 |
| Total | 71 | 100.00 |

Educational Attainment. The data in Table 4.7 indicate 64.8 percent (46) of the respondents had a diploma. Only one respondent had a bachelor's degree. The remaining 32.4 percent (23) were students.

Table 4.7

Frequency and Percentage Distribution of Occupational Therapy Respondents Based on Educational Attainment
(N = 71)

| Educational Attainment | Frequency | Percentage |
|---|---|---|
| Diploma | 46 | 64.8 |
| Teaching Diploma and Diploma | 1 | 1.4 |
| Bachelor's Degree | 1 | 1.4 |
| (Students) | 23 | 32.4 |
| Total | 71 | 100.0 |

Years of Experience as a Therapist. In Table 4.8 the data indicate that the respondents' years of experience ranged from 1 - 18 years. However, only one person had eighteen years of experience as a therapist.

Table 4.8

Frequency and Percentage Distribution of Occupational Therapy Respondents Based on Years of Experience as a Therapist (N = 71)

| Years of Experience as a Therapist | Frequency | Percentage |
|---|---|---|
| 1 - 3 | 18 | 25.35 |
| 4 - 6 | 19 | 26.76 |
| 7 - 9 | 10 | 14.08 |
| 18 - | 1 | 1.41 |
| (Students) | 23 | 32.4 |
| Total | 71 | 100.00 |

## PERSONAL CHARACTERISTICS OF PHYSIOTHERAPY RESPONDENTS

Sex. The majority of the physiotherapy respondents (70.1 percent) (61) were male and 29.9 percent (26) were female.

Distribution of Physiotherapy Respondents in Hospitals. As shown in Table 4.9 about 49 percent (43) of the respondents had worked in Kenyatta National hospital. The remaining 51 percent were distributed in other provincial hospitals that are shown in Table 4.9. Since there was no physiotherapy department in Mathari hospital, this hospital is not included in Table 4.9.

Age. The data presented in Table 4.10 indicate 46 percent (43) of the respondents were between 21 - 25 years old and approximately 35 percent (31) were between 26 - 35 years old. There were ten respondents who were more than thirty-six years old but less than sixty years old.

Table 4.9

Frequency and Percentage Distribution of Physiotherapy
Respondents Based on Provincial Hospital
(N = 87)

| Hospital | Frequency | Percentage |
|---|---|---|
| Kenyatta National hospital | 43 | 49.40 |
| Nyeri Provincial General hospital | 7 | 8.05 |
| Nakuru Provincial General hospital | 6 | 6.90 |
| Nyanza Provincial General hospital | 8 | 9.20 |
| Machakos Provincial General hospital | 8 | 9.20 |
| Coast Provincial General hospital | 7 | 8.05 |
| Kakamega Provincial General hospital | 8 | 9.20 |
| Total | 87 | 100.00 |

Table 4.10

Frequency and Percentage Distribution of Physiotherapy Respondents Based on Age
(N = 87)

| Age | Frequency | Percentage |
|---|---|---|
| 20 years or less | 6 | 6.90 |
| 21 - 25 | 40 | 45.98 |
| 26 - 35 | 31 | 35.62 |
| 36 - 50 | 6 | 4.60 |
| 51 - 60 | 4 | 6.90 |
| Total | 87 | 100.00 |

Marital Status. Forty-six percent (40) of the respondents were married and fifty-four percent (47) were single.

Job Group. As indicated in Table 4.11 about 48 percent (42) of the respondents were in Job Group G, and about 10 percent (9) were in Job Group H. 2.2 percent (2) were above Job Group H. The remaining 39.1 percent (34) were students.

Table 4.11

Frequency and Percentage Distribution of Physiotherapy Respondents Based on Job Group
(N = 87)

| Job Group | Frequency | Percentage |
|---|---|---|
| Job Group G | 42 | 48.28 |
| Job Group H | 9 | 10.34 |
| Job Group J | 1 | 1.15 |
| Job Group K | 1 | 1.15 |
| (Students) | 34 | 39.08 |
| Total | 87 | 100.00 |

Position. There were six categories of positions considered in this study. Table 4.12 presents data based on these six categories. About 45 percent (39) of the respondents in Table 4.12 were staff physiotherapists and 8 percent (7) were department heads in hospitals. There were thirty-four students who accounted for 39.1 percent of the total.

Table 4.12

Frequency and Percentage Distribution of Physiotherapy Respondents Based on Position
(N = 87)

| Position | Frequency | Percentage |
|---|---|---|
| Staff physiotherapist | 39 | 44.82 |
| Clinical instructor | -- | -- |
| Department head in MTC | 1 | 1.15 |
| Department head in hospital | 7 | 8.05 |
| Tutor in MTC | 6 | 6.90 |
| (Students) | 34 | 39.08 |
| Total | 87 | 100.00 |

Educational Attainment. The data presented in Table 4.13 indicate 58.62 percent (51) of the respondents had a diploma. Only one respondent had a Master's degree. The rest were students.

Table 4.13

Frequency and Percentage Distribution of Physiotherapy Respondents Based on Educational Attainment
(N = 87)

| Educational Attainment Diploma | Frequency | Percentage |
|---|---|---|
| Diploma | 51 | 58.62 |
| Teaching Diploma | 1 | 1.15 |
| Bachelor's degree | -- | -- |
| Master's degree | 1 | 1.15 |
| (Students) | 34 | 39.08 |
| Total | 87 | 100.00 |

Table 4.14

Frequency and Percentage Distribution of Physiotherapy Respondents Based on Years of Experience as a Therapist
(N = 87)

| Years of Experience as a Therapist | Frequency | Percentage |
|---|---|---|
| 1 - 4 | 20 | 22.99 |
| 5 - 8 | 17 | 19.54 |
| 9 - 20 | 12 | 13.79 |
| 26 - 34 | 4 | 4.60 |
| (Students) | 34 | 39.08 |
| Total | 87 | 100.00 |

Years of Experience as a Therapist. Table 4.14 indicates that 23 percent of the respondents had 1 to 4 years of experience as therapists. Approximately 20 percent (17) of the therapists had 5 to 8 years of experience. Above five percent (4) had 26 to 34 years of experience as therapists.

## Summary

The purpose of this section has been to present data on the questionnaire rate of returns and data analysis on demographic variables. The eight demographic variables used were: (1) sex, (2) hospital, (3) age, (4) marital status, (5) job group, (6) position, (7) educational attainment, and (8) years of experience as a therpist.

The respondents consisted of physiotherapists, occupational therapists and third year students in occupational therapy and physiotherapy who had worked in provincial hospitals in Kenya. Of the 158 respondents, 44.9 percent (71) were from occupational therapy and 55.1 percent (87) were from physiotherapy.

Grouped by sex, about 68.4 percent (108) of the respondents were males. The data revealed 70 percent (72) had worked in Kenyatta National hospital. The rest were distributed in other provincial hospitals. Out of the 72 who had worked in Kenyatta National hospital, 18.4 percent (29) were from occupational therapy and about 27 percent (43) were from physiotherapy. Grouped according to age, 79 percent of the total respondents were between 21 to 35 years old. The highest percentage (62 percent) were single.

The majority (51.9 percent) of the total respondents were in job group H and about 61.4 percent (97) had a diploma in occupational therapy or physiotherapy.

The years of experience for respondents in occupational therapy ranged from one to eighteen years while the years of experience for those in physiotherapy ranged from one to thirty-four years.

## Factor Analysis

This section of the chapter presents data obtained from the exploratory factor analysis of seventy effectiveness items. Kerlinger (1973:468) pointed out that factor analysis is:

> . . . a method of reducing a large number of measures to a small number called factors by discovering which ones 'go together' and the relations between the clusters of measures that go together.

Kim and Mueller (1978:86) note that factor analysis is based upon two postulates:

> . . . Postulate of Factorial Causation: the assumption that the observed variables are linear combinations of underlying factors, and the covariation between observed variables is solely due to their common sharing of one or more common factors.
>
> . . . Postulate of Parsimony: this stipulates that, given two or more equally compatible models for the given data, the simpler model is believed to be true; in factor analysis, only the model involving the minimum number of common factors is considered appropriate.

The purpose of factor analysis in this study was to reexamine the seventy effectiveness items and if possible to identify the items that cluster together.

Identification of Factors. In order to identify the factors that cluster together the following rules were established:

1. Items loading 0.40 or higher were to be primary sources of description of the factors, while the items loading below 0.40 were considered as secondary sources.

2. Items which load on a factor should have a meaningful and a logical fit into the factor in order to contribute to the naming of the factor.

Following the above rules, seven factors were identified as indicated earlier in the review of literature in Chapter II, and almost all the items loaded on the original factors. Further examination of the items revealed that some items that were considered as measures of factor six in Table 4.15 loaded in factor five (performing administrative functions). Since only two items loaded on factor five from factor six, no changes were undertaken in renaming factor six.

Table 4.15 presents the names of the seven factors and the items loading 0.40 or higher on the seven factors. Table 4.16 presents the results of factor analysis (varimax rotated factor matrix). The seven factors were used as the effectiveness variables in the analysis of data.

## SUMMARY

The purpose of this chapter has been to present data on the questionnaire rate of returns, the analysis of data on demographic variables and an exploratory factor analysis of effectiveness variables. The exploratory factor analysis (varimax rotated matrix) of seventy effectiveness items identified seven factors that were used as the effectiveness variables. Most of the items in each factor had loadings of higher than 0.40 and most of the items loaded on the original factors as proposed earlier in Chapter II.

Table 4.15

FACTOR ANALYSIS OF EFFECTIVENESS
VARIABLES USING SEVEN FACTORS

| FACTOR | VARIABLE | LOADING ≥ 0.4 | COMMENT |
|---|---|---|---|
| FACTOR 1<br>EVALUATION OF PATIENTS | 2. Performing appropriate patient evaluations, e.g. muscle testing, joint range of motion. | 0.49 | |
| | 3. Correctly administering and recording patient evaluations. | 0.65 | Loaded in Factor 2 |
| | 4. Correctly interpreting the results of the evaluations made on the patients. | 0.68 | |
| | 5. Evaluating patients jointly with the clinical instructor after the treatment. | 0.64 | Loaded in Factor 5 |
| | 6. Periodically re-evaluating the patients. | 0.69 | |
| | 7. Writing the patients' final evaluation results. | 0.69 | |
| | 8. Evaluating patients' vocational skills and preparedness for specific work settings after treatment. | 0.59 | |
| | 9. Evaluating patients' abilities to use community resources before discharge. | 0.45 | |
| | 33. Developing relationships with patients based on mutual trust and respect. | 0.42 | |
| FACTOR 2<br>FORMULATING AIMS OF TREATMENT AND CARRYING OUT TREATMENT | 11. Developing skills in formulating treatment goals for the patients. | 0.55 | |
| | 12. Developing skills in choosing appropriate therapeutic media to achieve the treatment goals. | 0.75 | |
| | 13. Selecting treatments which are meaningful to the patients and appropriate for his condition. | 0.75 | |
| | 14. Using a variety of therapeutic media to achieve the treatment goals. | 0.60 | |
| | 15. Revising or modifying treatment goals periodically or when necessary. | 0.59 | |
| | 16. Having their treatment plans checked at successive intervals to ensure patients get adequate treatment. | 0.53 | |
| | 17. Evaluating and preparing treatment plans for different diagnoses. | 0.56 | |
| | 20. Being introduced to new treatment techniques in the department. | 0.43 | |
| | 23. Being aware of behavior patterns and reactions that aid in providing the effectiveness of their treatments. | 0.51 | |

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Table 4.15 (Continued)

| FACTOR | VARIABLE | LOADING > 0.4 | COMMENT |
|---|---|---|---|
| FACTOR 3<br>BROADENING MEDICAL TERMINOLOGY AND KNOWLEDGE | 19. Preparing treatment for the patients in the wards beforehand. | 0.44 | |
| | 22. Modifying or changing equipment during treatment to compensate for the patients' loss of function. | 0.44 | |
| | 24. Using medical technology in writing up patients interviews and progress reports. | 0.41 | |
| | 26. Developing interest in doing simple clinical research. | 0.41 | |
| | 29. Attending special lectures, surgical operations and treatment sessions. | 0.45 | |
| | 30. Doing relevant assignments which are graded by the clinical instructors. | 0.45 | |
| | 31. Learning medical conditions and treatments through lectures, discussions and case studies. | 0.59 | |
| | 35. Responding to and dealing effectively with attitudes displayed by the patients. | 0.46 | |
| FACTOR 4<br>USING SELF AS THERAPEUTIC MEDIA | 1. Identifying the patients' problem areas through observation | 0.48 | |
| | 37. Preparing thorough presentations in verbal and written communication of patients' problems or progress. | 0.63 | |
| | 38. Reporting the progress of patients clearly and accurately during ward rounds. | 0.67 | |
| | 39. Developing interviewing techniques. | 0.47 | |
| | 40. Developing verbal communication skills while performing group treatments. | 0.71 | |
| | 41. Writing periodic and accurate notes on the progress or lack of progress of patients. | 0.69 | |
| | 42. Formulating and giving instructions to patients during treatment sessions. | 0.47 | |
| FACTOR 5 | 43. Understanding the procedure for ordering department equipment, tools and supplies. | 0.72 | |
| | 44. Discussing with the hospital staff, e.g. clinical instructor, about department rules, regulations and policies. | 0.75 | |
| | 45. Keeping up-to-date records on the patients assigned to them. | 0.59 | |

Table 4.15 (Continued)

| FACTOR | VARIABLE | LOADING ≥ 0.4 | COMMENT |
|---|---|---|---|
| FACTOR 5<br>PERFORMING ADMINISTRATIVE FUNCTIONS | 46. Discussing with hospital staff, e.g. clinical instructors any departmental plans and innovations. | 0.55 | |
| | 47. Learning how to maintain equipment, tools and materials in the department. | 0.44 | |
| | 48. Coordinating patients' treatment plans with those of other medical term members who are treating the same patients. | 0.48 | |
| | 49. Visiting other departments in order to make them aware of other forms of treatment. | 0.68 | |
| | 50. Participating actively in interdepartmental meetings when necessary. | 0.62 | |
| | 51. Getting feedback on their performance from the hospital staff, e.g. clinical instructors during the mid-term and final term evaluations. | 0.54 | |
| | 52. Understanding appropriate procedures and techniques of evaluating department facilities for use by students. | 0.50 | |
| | 53. Understanding how to construct a time table. | 0.52 | |
| | 54. Developing skills to deal with interpersonal conflict and provide good communication and cooperation between the students and staff members. | 0.57 | |
| | 55. Understanding the procedures for selling articles that are made by patients in the department. | 0.54 | |
| | 56. Developing skills in determining the effectiveness of clinical practice. | 0.49 | |
| | 58. Developing skills in planning and coordinating staff schedules. | 0.44 | |
| | 59. Developing skills in setting up and maintaining an inventory of equipment, tools and materials in the department. | 0.56 | |
| | 62. Developing skills in coordinating intra- and inter-disciplinary services in the department. | 0.40 | Loaded with Factor 6 |
| | 64. Observing the professional code of ethics. | 0.46 | |
| | 70. Expressing freely their opinions and ideas concerning the profession. | 0.47 | |

Table 4.15 (Continued)

| FACTOR | VARIABLE | LOADING ≥ 0.4 | COMMENT |
|---|---|---|---|
| FACTOR 6<br>LEARNING SKILLS TO UNDERSTAND DEPARTMENTAL NEEDS | 60. Developing skills in establishing and reviewing departmental goals and objectives. | 0.66 | |
| | 61. Developing skills in determining staff requirements in the department. | 0.48 | |
| | 62. Developing skills in coordinating intra- and interdisciplinary services in the department. | 0.54 | Loaded with Factor 5 |
| FACTOR 7<br>DEVELOPING PROFESSIONAL ATTITUDES | 65. Dealing effectively with negative attitudes displayed by patients. | 0.59 | |
| | 66. Developing a helpful attitude toward the patient. | 0.65 | |
| | 67. Accepting responsibility for those patients assigned to them. | 0.59 | |
| | 68. Developing a good rapport with the patients and staff members. | 0.65 | |
| | 69. Developing a strong interest in professional development. | 0.59 | |

Table 4.16

VARIMAX ROTATED FACTOR MATRIX
FOR 70 EFFECTIVENESS VARIABLES

| FFECTIVE VARIABLES | FACTORS AND FACTOR LOADINGS | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1 Evaluation of Patients | 2 Formulation of Aims of Treatment and Carrying Out Treatment | 3 Broadening Medical Terminology and Knowledge | 4 Using Self As Therapeutic Media | 5 Performing Administrative Functions | 6 Developing Communication Skills | 7 Developing Professional Attitudes |
| 1 | 0.26042 | 0.15796 | -0.11068 | 0.48397x | 0.13104 | -0.11901 | 0.37608 |
| 2 | 0.49141x | 0.32286 | 0.15001 | 0.30245 | 0.01687 | -0.07609 | -0.03909 |
| 3 | 0.65163x | 0.40120x | 0.14256 | 0.22235 | 0.04031 | -0.05628 | 0.10158 |
| 4 | 0.68000x | 0.20856 | 0.06685 | 0.23631 | 0.12513 | 0.10047 | 0.18060 |
| 5 | 0.64103x | 0.21843 | 0.04236 | -0.00485 | 0.46368x | -0.00051 | 0.12092 |
| 6 | 0.69301x | 0.12753 | 0.13836 | 0.03759 | 0.18670 | 0.15886 | 0.12332 |
| 7 | 0.69160x | 0.29793 | 0.06005 | 0.11091 | 0.08412 | 0.10873 | 0.07043 |
| 8 | 0.58732x | 0.15637 | 0.11854 | -0.00278 | 0.17200 | 0.29848 | 0.08603 |
| 9 | 0.44833 | 0.31661 | 0.21096 | 0.04873 | 0.16033 | 0.35279 | -0.12013 |
| 10 | 0.16897 | 0.32630 | 0.21984 | 0.10463 | 0.54738x | -0.01301 | 0.26396 |
| 11 | 0.24859 | 0.54922x | 0.16302 | -0.02325 | 0.09285 | 0.18904 | 0.39795 |
| 12 | 0.14793 | 0.75140x | 0.00607 | 0.11146 | 0.17443 | 0.03448 | 0.25384 |
| 13 | 0.09430 | 0.74987x | -0.05866 | 0.15369 | 0.14248 | -0.03276 | 0.07231 |
| 14 | 0.12734 | 0.60196x | 0.13214 | -0.06909 | 0.16879 | 0.21559 | -0.04277 |
| 15 | 0.31234 | 0.59311x | 0.28290 | 0.03616 | 0.31057 | 0.24290 | -0.01327 |
| 16 | 0.33772 | 0.53203x | 0.34204 | 0.02683 | 0.26117 | 0.06730 | 0.07865 |
| 17 | 0.26020 | 0.56037x | 0.06675 | 0.23614 | 0.10467 | 0.05651 | 0.19650 |
| 18 | 0.37634 | 0.37671 | 0.26022 | 0.08425 | 0.28720 | 0.04517 | 0.03337 |
| 19 | 0.30846 | 0.39918 | 0.43693x | 0.26395 | 0.13824 | 0.12818 | 0.06372 |
| 20 | 0.20886 | 0.43015x | 0.08034 | 0.22226 | 0.24404 | -0.05794 | 0.01094 |
| 21 | 0.16323 | 0.15520 | 0.10873 | 0.08272 | -0.07603 | 0.32562 | 0.14707 |
| 22 | -0.11465 | 0.37064 | 0.43629x | 0.16617 | 0.06897 | 0.14235 | -0.09699 |
| 23 | 0.12151 | 0.50886x | 0.17687 | 0.25819 | 0.11822 | 0.21694 | 0.00011 |
| 24 | 0.27894 | 0.17739 | 0.41232x | 0.27034 | 0.17871 | -0.10149 | 0.27366 |
| 25 | 0.24365 | 0.11394 | 0.33959 | 0.14391 | 0.27015 | -0.04072 | 0.37854 |
| 26 | 0.19559 | 0.12754 | 0.40634x | -0.00040 | 0.23481 | 0.28514 | 0.23738 |
| 27 | 0.31669 | 0.15895 | 0.39620x | 0.23395 | 0.12541 | 0.22544 | 0.14945 |
| 28 | 0.12160 | 0.04099 | 0.39156 | 0.28051 | 0.15995 | 0.04761 | 0.38821 |
| 29 | 0.00580 | 0.07548 | 0.44598x | 0.17140 | 0.35491 | 0.03640 | 0.16298 |
| 30 | 0.19473 | 0.03630 | 0.44687x | 0.24485 | 0.29154 | 0.01937 | 0.36629 |
| 31 | 0.16958 | -0.00265 | 0.58907x | 0.26295 | 0.19912 | 0.08265 | 0.19202 |
| 32 | 0.39482 | 0.08692 | 0.32132 | 0.17584 | 0.23463 | 0.07758 | 0.31840 |
| 33 | 0.41966x | -0.02988 | 0.20716 | 0.14608 | 0.32496 | 0.13809 | 0.09912 |
| 34 | 0.22468 | -0.07015 | 0.24309 | 0.33483 | 0.30661 | 0.04447 | 0.11355 |
| 35 | 0.08134 | 0.28625 | 0.45989x | 0.34816 | 0.18177 | 0.30260 | 0.06724 |
| 36 | 0.30070 | 0.28293 | 0.21637 | 0.34896 | 0.24369 | -0.04957 | 0.29803 |
| 37 | 0.09681 | 0.15563 | 0.17394 | 0.62527x | 0.14828 | 0.00174 | 0.29194 |
| 38 | 0.20129 | 0.13009 | 0.20551 | 0.66990x | 0.14438 | 0.13160 | 0.23322 |
| 39 | 0.27282 | 0.06367 | 0.27480 | 0.47437x | 0.19623 | 0.11991 | 0.18504 |
| 40 | 0.12174 | 0.12983 | 0.09352 | 0.70783x | 0.00326 | 0.12062 | 0.06452 |
| 41 | -0.00434 | 0.14571 | 0.09527 | 0.68667x | 0.36069 | 0.20719 | 0.21715 |
| 42 | -0.03269 | 0.16774 | 0.17121 | 0.46684x | 0.14022 | 0.14755 | 0.31228 |
| 43 | 0.19893 | 0.16050 | 0.06065 | 0.23323 | 0.71718x | -0.09109 | 0.05012 |
| 44 | 0.18110 | 0.10422 | 0.12064 | 0.19151 | 0.75001x | 0.14027 | 0.19870 |
| 45 | 0.37535 | -0.02751 | 0.19208 | 0.30258 | 0.59184x | 0.01892 | 0.09409 |
| 46 | 0.31062 | 0.06924 | 0.17195 | 0.31856 | 0.54837x | 0.19856 | 0.11694 |
| 47 | 0.16597 | 0.14003 | 0.39622 | 0.12557 | 0.43782x | 0.05130 | -0.14387 |
| 48 | 0.34542 | 0.20652 | 0.22851 | 0.04909 | 0.47848x | -0.00921 | 0.16130 |
| 49 | 0.00741 | 0.08273 | 0.24372 | 0.06879 | 0.68301x | 0.13831 | 0.28997 |
| 50 | 0.07576 | 0.19874 | 0.27334 | -0.03683 | 0.62346x | 0.12933 | 0.13012 |
| 51 | 0.08816 | 0.24585 | 0.14001 | 0.17835 | 0.53711x | 0.17518 | 0.25322 |
| 52 | 0.23103 | 0.16753 | 0.20505 | 0.03893 | 0.49874x | 0.25295 | 0.21770 |
| 53 | 0.17342 | 0.14889 | 0.30325 | 0.01756 | 0.51987x | 0.15930 | 0.28735 |
| 54 | 0.12736 | 0.21732 | 0.05758 | 0.13997 | 0.57383x | 0.18512 | 0.16204 |
| 55 | -0.08937 | 0.06834 | 0.21986 | 0.07781 | 0.54097x | 0.04665 | 0.24260 |
| 56 | 0.24884 | 0.11769 | 0.25667 | 0.09590 | 0.48692x | 0.38374 | 0.38358 |
| 57 | 0.25478 | 0.17846 | -0.01508 | 0.14414 | 0.35629 | 0.16617 | 0.35066 |
| 58 | 0.27780 | 0.38052 | -0.08482 | 0.10722 | 0.43885x | 0.18805 | 0.26484 |
| 59 | 0.20736 | 0.29408 | -0.12813 | 0.24450 | 0.55597x | 0.14018 | 0.13190 |
| 60 | 0.12436 | 0.06777 | -0.00034 | 0.14420 | 0.38843 | 0.66197x | 0.15755 |
| 61 | 0.14540 | 0.11092 | 0.16176 | 0.14655 | 0.32581 | 0.47845x | 0.20711 |
| 62 | 0.04844 | 0.11662 | 0.16895 | 0.17734 | 0.40109x | 0.54337x | 0.07787 |
| 63 | 0.09956 | 0.23184 | 0.33514 | -0.11983 | 0.31717 | 0.12202 | 0.03975 |
| 64 | 0.10699 | 0.19404 | -0.03336 | 0.13084 | 0.45606x | 0.32992 | 0.26235 |
| 65 | 0.12640 | 0.10221 | 0.07230 | 0.24214 | 0.28879 | 0.14379 | 0.58613x |
| 66 | -0.02780 | 0.15702 | 0.03268 | 0.24570 | 0.30271 | 0.15098 | 0.65268x |
| 67 | 0.13395 | 0.01697 | 0.02202 | 0.26315 | 0.21218 | 0.10834 | 0.58909x |
| 68 | 0.03515 | 0.02301 | 0.15617 | 0.33871 | 0.17581 | 0.13307 | 0.64824x |
| 69 | 0.11489 | 0.16266 | 0.27604 | 0.04112 | 0.32561 | 0.07955 | 0.59435x |
| 70 | 0.10780 | 0.12617 | 0.36222 | 0.02539 | 0.42526x | 0.11797 | 0.39705 |

# CHAPTER 5

# DESCRIPTION AND ANALYSIS OF DATA OF THE KENYATTA NATIONAL HOSPITAL

This chapter presents a brief description of the departments of physiotherapy and occupational therapy in the Kenyatta National hospital and the analysis of data on (1) linkage dimensions, (2) the effectiveness and (3) the ideal importance of broad goal statements of clinical practice.

The department of physiotherapy was established in 1943 and approximately 27,000 treatments are given by twenty seven physiotherapists each year. The department of occupational therapy was established in 1962 and about 2895 patients are treated by eighteen occupational therapists every year.

The analysis of data on linkage dimensions will be presented following the order of sub-problems formulated in Chapter 1 under the headings of formalization, intensity, reciprocity and standardization. A summary of the linkage dimensions is provided at the end of this chapter. The rating responses for the thirty one items that were used to determine the four linkage dimensions are shown in Table 5.1.

## PROBLEM 1: FORMALIZATION

### Sub-Problem 1.1

Were there formal or informal agreements between the Medical Training Centre and the Kenyatta National hospital in the departments of occupational therapy and physiotherapy?

## TABLE 5.1

## SUMMARY OF RATING RESPONSES ON THIRTY ONE LINKAGE INDICATORS IN THE DEPARTMENTS OF OCCUPATIONAL THERAPY AND PHYSIOTHERAPY IN THE KENYATTA NATIONAL HOSPITAL

| LINKAGE INDICATORS | DEPARTMENT | | | |
|---|---|---|---|---|
| | OCCUPATIONAL THERAPY | | PHYSIOTHERAPY | |
| A. FORMALIZATION | Formal | Informal | Formal | Informal |
| a) Formal Agreement (Written ... Informal) | | | | |
| Item | | | | |
| 1. | | X | | X |
| 2. | | X | | X |
| 3. | | X | | X |
| 4. | X | | X | |
| 5. | X | | X | |
| b) Coordination (Formal ... Informal) | Formal | Informal | Formal | Informal |
| 6. | X | | | X |
| B. FREQUENCY OF INTERACTION (Low ... High) | Low | High | Low | High |
| 7. | | X | | X |
| 8. | | X | X | |
| 9. | n/a | | n/a | |
| 10. | | X | | X |
| 11. | | X | | X |
| 12. | n/a | | n/a | |
| 13. | n/a | | n/a | |
| C. RELATIVE RESOURCE COMMITMENT (Low ... High) | Low | High | Low | High |
| 14. | | X | | X |
| 15. | | X | | X |
| 16. | n/a | | n/a | |
| 17. | | X | | X |
| 18. | X | | n/a | |
| D. RESOURCE RECIPROCITY (Unilateral ... Bilateral Exchange) | Unilateral | Bilateral | Unilateral | Bilateral |
| 19. | n/a | | n/a | |
| 20. | | X | n/a | |
| 21. | | X | | X |
| E. DEFINITIONAL RECIPROCITY (Mutual Agreement ... Unilateral Decision) | Mutual | Unilateral | Mutual | Unilateral |
| 22. | X | | X | |
| 23. | X | | n/a | |
| 24. | X | | X | |
| 25. | | X | | X |
| 26. | X | | X | |
| 27. | X | | X | |
| F. PROCEDURAL STANDARDIZATION (Low ... High) | Low | High | Low | High |
| 28. | X | | X | |
| 29. | X | | X | |
| 30. | X | | n/a | |
| 31. | X | | X | |

Each item was rated in accord with the rating scales shown in Part 3 of the questionnaire (Appendix A).

The interpretations of the rating responses for the thirty one items that determined the four linkage dimensions are also shown in Part 3 of the questionnaire (Appendix A).

### Sub-Problem 1.2

Was there formal or informal coordination of students' clinical practice between the Medical Training Centre and the Kenyatta National hospital in the departments of physiotherapy and occupational therapy?

### Findings on Formalization of the Relationship

The formalization variable was measured by the existence of formal agreements and formal-informal coordination between the Medical Training Centre and the Kenyatta National hospital in the departments of physiotherapy and occupational therapy. In order to determine the formalization dimension six items were used. Items 1, 2 and 3 showed that there were informal agreements between the Medical Training Centre and the Kenyatta National hospital in the departments of occupational therapy and physiotherapy. However, items 4 and 5 revealed that there were formal agreements in the two departments. Item 6 indicated that there were clinical instructors in the department of occupational therapy who coordinated the students' clinical practice. However, the responsibility of coordinating students' clinical practice in the department of physiotherapy was carried out by department heads. The qualified physiotherapists felt that the tutors were responsible for supervising the students during clinical practice but the tutors appeared to disagree.

## PROBLEM 2: INTENSITY

### Sub-Problem 2.1

What was the frequency of interactions between the Medical Training Centre and the Kenyatta National hospital in the departments of occupational therapy and physiotherapy?

## Sub-Problem 2.2

What were the relative resource commitments between the Medical Training Centre and the Kenyatta National hospital in the departments of occupational therapy and physiotherapy?

## Findings on the Intensity of the Relationship

Marrett (1971) identified the frequency of interaction and the relative resource commitments as the two indicators of intensity dimensions. Seven items were used to determine frequency of interaction and five items were used to determine the relative resource commitments between the Medical Training Centre and the Kenyatta National hospital.

Items 7, 8, 10 and 11 revealed a high frequency of interaction among the occupational therapy departments and items 7 and 9 also revealed a high frequency of interaction between the physiotherapy departments. Items 9, 12 and 13 indicated that in the two professions (1) ". . . students did not attend classes during clinical practice, (2) ". . . clinical instructors were not involved in the instruction of students at the Medical Training Centre, and (3) ". . . tutors did not receive assistance from the clinical instructors in developing courses or goals of clinical practice." The interviews with department heads in the two professions in the Kenyatta National hospital indicated that the involvement of clinical instructors and tutors in those activities would benefit the students during clinical practice. It was reported during the interviews that the qualified therapists contributed "very little" in developing the goals of clinical practice in the two professions.

Items 14 through 18 assessed the relative resource commitments between the Medical Training Centre and the Kenyatta National hospital. Item 14 revealed that there were no specific budgets in the two departments for expenditure during students' clinical practice. However, it was revealed that money was available from other accounts. Item 15 indicated that the hospital provided four or more students in the departments of physiotherapy and occupational therapy with facilities for clinical practice. This was an indicator of high resource commitment. Item 16 showed that the clinical instructors in the department of occupational therapy were not involved in the instruction of students at the Medical Training Centre. However, Item 17 revealed that four tutors in the two professions were involved in students' clinical practice. This represented a high resource commitment from the Medical Training Centre. Item 18 showed that there were no therapeutic equipment or materials that were specifically ordered when the students were in clinical practice. However, in the department of occupational therapy it was reported that some materials were ordered once or twice when students were in clinical practice. This was considered as a low resource commitment since it was reported that the budget set for these materials was limited. The information from the interview showed that there was lack of equipment and materials when students were in clinical practice.

## PROBLEM 3: RECIPROCITY

### Sub-Problem 3.1

Were there unilateral or bilateral exchanges of resources between the Medical Training Centre and the Kenyatta National hospital in the departments of physiotherapy and occupational therapy?

### Sub-Problem 3.2

Were the conditions of resource exchanges between the Medical Training Centre and the Kenyatta National hospital in the departments of occupational therapy and physiotherapy mutually agreed upon?

### Findings on Reciprocity of the Relationship

Two indicators of reciprocity dimension were used. These were: (1) resource reciprocity and (2) definitional reciprocity. Three items were used to determine resource reciprocity and six items for definitional reciprocity.

Item 19 revealed that there were no exchanges or sharing of funds in the two professions when students were in clinical practice. However, Item 20 showed that there were exchanges of materials between the departments of occupational therapy. The information from the interview revealed that students at the Medical Training Centre made some therapeutic equipment and aids for the paediatric occupational therapy department at the Kenyatta National hospital. It was also reported that the departments of occupational therapy in Kenyatta National hospital provided some materials for teaching purposes to the tutors in the Medical Training Centre. However, Item 20 revealed that there were no exchanges or sharing of therapeutic equipment and materials between the departments of physiotherapy in the Medical Training Centre and in the hospital. Item 21 indicated that there were bilateral exchanges of information and ideas between the Medical Training Centre and the hospital in the two professions when students were in clinical practice.

The second indicator of reciprocity that was examined was definitional reciprocity. Items 22, 23, 24 and 27 revealed that there were mutual agreements in the exchanges or sharing of (1) information, (2) clinical instructors, (3) therapeutic equipment and materials and (4) physical facilities between the occupational therapy departments at the Medical Training Centre and at the Kenyatta National hospital. However, Item 25 indicated a unilateral decision on the exchange of or sharing of tutors. The interview information revealed that the decisions on the selection of tutors were normally made at the Medical Training Centre. The therapists felt they contributed very little. Item 26 showed that in the two professions there was some agreement on the referral of patients from the hospital to the Medical Training Centre for learning purposes. It was reported in the interviews that the clinical instructors and department heads assisted the students in selecting patients for case studies. Also, Item 25 indicated some agreement in the two departments on the use of tutors as consultants in the hospitals when students were in clinical practice. Items 24 and 27 showed that there were mutual agreements between the Medical Training Centre and the hospital on the exchange of (1) therapeutic equipment and materials for learning purposes and (2) and on the sharing of physical facilities by tutors and students in the department of physiotherapy.

## PROBLEM 4: STANDARDIZATION

### Sub-Problem 4.1

To what extent were the rules, regulations and procedures for carrying out transactions between the Medical Training Centre and the Kenyatta National hospital in the departments of physiotherapy and occupational therapy clearly defined?

### Findings on Standardization of the Relationship

Marrett (1971:94) indicated that the standardization of exchanges of resources between organizations may be measured by the fixedness of units of exchange and the fixedness of procedures for exchange. In this study the second indicator (procedural standardization) was used. Four items were used to determine procedural standardization between the Medical Training Centre and the Kenyatta National hospital.

Items 28, 29, 30 and 31 indicated a low procedural standardization in the two departments. In the department of occupational therapy there were written guidelines that described the job descriptions for the third year students and the clinical instructors. However, these guidelines were reported to be poorly written and unclear to the staff occupational therapists.

## EFFECTIVENESS OF CLINICAL PRACTICE

This section of the chapter presents the perceptions of both the occupational therapy and physiotherapy respondents on the effectiveness of clinical practice in the Kenyatta National hospital.

## PROBLEM 5: EFFECTIVENESS

### Sub-Problem 5.1

What were the perceptions of both the occupational therapy and the physiotherapy respondents in the Kenyatta National hospital on the effectiveness of clinical practice?

### Findings on Effectiveness

Table 5.2 presents the data on the effectiveness of clinical practice in the Kenyatta National hospital. The number of respondents, the rank orders, the mean scores and the standard deviations are shown. The mean scores were used as the basis for rank ordering.

The two highest and the two lowest means of effectiveness are underlined. The results indicate that the mean ratings for effectiveness ranged from 2.49 to 3.37 indicating effectiveness was perceived to be "good" and "fair". The attainment of goal statements that were ranked 2, 3, 4, 5, 6 and 7 were perceived to be "fair", and the attainment of the goal that was ranked 1 was perceived to be good in Table 5.2.

The two goal statements that had the "lowest" mean scores and were perceived to be "good" and "fair" were: (1) ". . . providing the students with the opportunities of using themselves as therapeutic media, and (2) ". . . providing the students with the opportunities of performing administrative functions" respectively.

The two goals that had the "highest" mean scores and were perceived to be "fair" in effectiveness were: (1) ". . . providing the students with the opportunities of evaluating patients and (2) ". . . providing the students with the opportunities of developing

## Table 5.2

## RESPONDENTS' PERCEPTIONS OF EFFECTIVENESS OF CLINICAL PRACTICE IN KENYATTA NATIONAL HOSPITAL

| | Broad Goal Statement | N | $\overline{X}$ | SD | Rank Order |
|---|---|---|---|---|---|
| | Section A | | | | |
| 1. | Providing the students with the opportunities of evaluating patients. | 72 | 3.08* | 0.70 | 6 |
| | Section B | | | | |
| 2. | Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | 71 | 2.94 | 0.66 | 5 |
| | Section C | | | | |
| 3. | Providing the students with the opportunities of broadening their medical knowledge and terminology. | 72 | 2.88 | 0.78 | 3 |
| | Section D | | | | |
| 4. | Providing the students with the opportunities of using themselves as therapeutic media. | 72 | 2.49* | 0.69 | 1 |
| | Section E | | | | |
| 5. | Providing the students with the opportunities of developing communication skills. | 72 | 2.89 | 0.67 | 4 |
| | Section F | | | | |
| 6. | Providing the students with the opportunities of developing professional attitudes. | 72 | 3.37* | 0.72 | 7 |
| | Section G | | | | |
| 7. | Providing the students with the opportunities of performing administrative functions. | 72 | 2.84* | 0.72 | 2 |

Interpretation of the Effectiveness Scale: 1-1.49 = very good; 1.50-2.49 = good; 2.50-3.49 = fair; 3.50-4.49 = poor; 4.50-5 = very poor.

*Underlined entries: ____ indicates the two lowest means and ---- indicates the two highest means for effectiveness.

professional attitudes."

## IDEAL IMPORTANCE OF BROAD GOAL STATEMENTS OF CLINICAL PRACTICE

This section of the chapter examines the ideal importance of broad goal statements of clinical practice.

### Sub-Problem 6.1

What were the perceptions of both the occupational therapy and physiotherapy respondents in Kenyatta National hospital on the ideal importance of broad goal statements of clinical practice?

### Findings on Ideal Importance of Broad Goal Statements

In order to determine the respondents' perceptions of the ideal importance of broad goal statements they rated seventy skills pertaining to the seven broad goal statements on a five-point Likert-type scale. Table 5.3 presents the data on the respondents' perceptions of ideal importance of broad goal statements in Kenyatta National hospital. The number of respondents, the rank orders, the mean scores and the standard deviations are shown. The mean scores were used as the basis for rank ordering.

The two highest and the two lowest mean scores of ideal importance of broad goal statements are underlined. The results indicate that the mean ratings for ideal importance of goal statements ranged from 1.47 to 1.85 suggesting that one broad goal statement was perceived to be "very important" and the six remaining goals were perceived to be "important".

## Table 5.3

## RESPONDENTS' PERCEPTIONS OF IDEAL IMPORTANCE OF BROAD GOALS IN THE KENYATTA NATIONAL HOSPITAL

| | Broad Goal Statement | N | $\overline{X}$ | SD | Rank Order |
|---|---|---|---|---|---|
| | Section A | | | | |
| 1. | Providing the students with the opportunities of evaluating patients. | 72 | 1.47* | 0.36 | 1 |
| | Section B | | | | |
| 2. | Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | 71 | 1.56* | 0.46 | 2 |
| | Section C | | | | |
| 3. | Providing the students with the opportunities of broadening their medical knowledge and terminology. | 72 | 1.62 | 0.37 | 5 |
| | Section D | | | | |
| 4. | Providing the students with the opportunities of using themselves as therapeutic media. | 72 | 1.59 | 0.46 | 4 |
| | Section E | | | | |
| 5. | Providing the students with the opportunities of developing communication skills. | 72 | 1.57 | 0.42 | 3 |
| | Section F | | | | |
| 6. | Providing the students with the opportunities of developing professional attitudes. | 72 | 1.85* | 0.55 | 7 |
| | Section G | | | | |
| 7. | Providing the students with the opportunities of performing administrative functions. | 72 | 1.67* | 0.46 | 6 |

Interpretation of the Ideal Importance Scale: 1-1.49 = very important; 1.50-2.49 = important; 2.50-3.49 = moderately important; 3.50-4.49 = of little importance; 4.50-5 = not important.

*Underlined entries: ____ indicates the two lowest means and ---- indicates the two highest means for ideal importance of goals.

The two goal statements that had the "lowest" mean scores were: (1) ". . . providing the students with the opportunities of evaluating patients" and (2) ". . . providing the students with the opportunities of formulating aims of treatment and carrying out treatment".

The two goal statements that had the highest mean scores and were perceived to be "important" were: (1) ". . . providing the students with the opportunities of developing professional attitudes" and (2) ". . . providing the students with the opportunities of performing administrative functions.

## Further Analysis

An examination of mean scores of effectiveness in Table 5.2 and mean scores of ideal importance of broad goal statements in Table 5.3 revealed some interesting results. The goals in section A and B in Table 5.3 were ranked 1 and 2 on the ideal importance scale, however, on the effectiveness sclaes, the goals in sections A and B were ranked 6 and 5 respectively. This was an indication that the two goals that were perceived to be "very important" and "important" were not satisfactorily attained compared with the goals that were perceived to be less important. The goal in section F in Table 5.3 was ranked 7 on both the effectiveness scale and the ideal importance scale. This indicated that, the goal in section F was perceived to be less important and less attained compared to the other goals.

## SUMMARY

This chapter presented analysis of data on: (1) linkage dimensions; (2) effectiveness and ideal importance of broad goal statements of clinical practice in the Kenyatta National hospital.

Table 5.4 presents a summary of the linkage dimensions that were found in the Kenyatta National hospital in the departments of physiotherapy and occupational therapy.

As indicated in Table 5.4 the formalization dimension was found to be informal in both the departments of physiotherapy and occupational therapy. However, coordination was found to be formal in the department of occupational therapy but informal in the department of physiotherapy. In the department of occupational therapy there were formal clinical instructors whereby in the department of physiotherapy the responsibility of coordinating the students' clinical practice was left to the department head in the hospital .

The second linkage dimension that was studied was intensity of the relationship. A high intensity of relationship was found for the two indicators of intensity in both the departments of occupational therapy and physiotherapy.

The third linkage dimension that was examined was reciprocity. Two indicators were used for this dimension: (1) resource reciprocity and (2) definitional reciprocity. The first indicator of reciprocity was found to be bilateral in the two departments and the second subdimension of reciprocity was found to indicate "mutual agreements" on the exchanges of resources.

The final linkage dimension that was considered was procedural standardization. This linkage indicator was found to be low in the two departments in Kenyatta National hospital.

The second and third sections of the chapter focused on the analyses of data on the effectiveness and ideal importance of broad goals of clinical practice respectively. The effectiveness of clinical practice was perceived to be "good" one effectiveness variable and "fair" on six effectiveness variables. The findings on the ideal importance of broad goals of clinical practice revealed that six goals were perceived to be "important" and one goal was perceived to be "very important".

## TABLE 5.4

## PROFILE OF LINKAGE DIMENSIONS FOUND IN KENYATTA NATIONAL HOSPITAL

| LINKAGE DIMENSION | DEPARTMENT | |
|---|---|---|
| | OCCUPATIONAL THERAPY | PHYSIOTHERAPY |
| A. FORMALIZATION OF THE RELATIONSHIP | | |
| a. Formal Agreement Written ... Informal | Informal | Informal |
| b. Coordination (formal coordination ... informal) | Formal | Informal |
| B. INTENSITY OF RELATIONSHIP | | |
| a. Frequency of Interaction (High ... Low) | High | High |
| b. Relative Resource Commitment (High ... Low) | High | High |
| C. RECIPROCITY OF RELATIONSHIP | | |
| a. Resource Reciprocity (Bilateral ... Unilateral exchange) | Bilateral exchange | Bilateral exchange |
| b. Definitional Reciprocity (Mutual agreement ... Unilateral decision) | Mutual agreement | Mutual agreement |
| D. PROCEDURAL STANDARDIZATION (High ... Low) | Low | Low |

# CHAPTER 6

## DESCRIPTION AND ANALYSIS OF DATA OF THE MATHARI HOSPITAL

The focus of this chapter is to provide a brief description of the department of occupational therapy in the Mathari hospital and to present the analysis of data pertaining to linkage dimensions, effectiveness and the ideal importance of broad goal statements of clinical practice in the department of occupational therapy.

The department of occupational therapy was established in 1962 and about 1652 patients are treated by eight occupational therapists every year. The occupational therapy department is one of the biggest departments in Kenya and it provides the occupational therapy students with clinical practice in the area of psychiatric rehabilitation.

The analysis of data on linkage dimensions will be presented following the order of sub-problems that were formulated in Chapter 1. A summary of the linkage dimensions is presented at the end of this chapter. The rating responses for the thirty one items that were used to determine the four linkage dimensions in the departments of occupational therapy and physiotherapy are shown in Table 6.1.

### PROBLEM 1: FORMALIZATION

#### Sub-Problem 1.1

Were there formal or informal agreements between the Medical Training Centre and the Mathari hospital in the department of occupational therapy?

## TABLE 6.1

## SUMMARY OF RATING RESPONSES ON THIRTY ONE LINKAGE INDICATORS IN THE DEPA DEPARTMENT OF OCCUPATIONAL THERAPY IN THE MATHARI HOSPITAL

| | DEPARTMENT | |
|---|---|---|
| LINKAGE INDICATORS | OCCUPATIONAL THERAPY | |
| A. FORMALIZATION | Formal | Informal |
| a) Formal Agreement (Written ... Informal) | | |
| Item | | |
| 1. | | X |
| 2. | | X |
| 3. | | X |
| 4. | X | |
| 5. | X | |
| b) Coordination (Formal ... Informal) | Formal | Informal |
| 6. | X | |
| B. FREQUENCY OF INTERACTION (Low ... High) | Low | High |
| 7. | | X |
| 8. | | X |
| 9. | n/a | |
| 10. | | X |
| 11. | | X |
| 12. | n/a | |
| 13. | n/a | |
| C. RELATIVE RESOURCE COMMITMENT (Low ... High) | Low | High |
| 14. | X | |
| 15. | | X |
| 16. | n/a | |
| 17. | X | |
| 18. | X | |
| D. RESOURCE RECIPROCITY (Unilateral ... Bilateral Exchange) | Unilateral | Bilateral |
| 19. | n/a | |
| 20. | n/a | |
| 21. | | X |
| E. DEFINITIONAL RECIPROCITY (Mutual Agreement ... Unilateral Decision) | Mutual | Unilateral |
| 22. | X | |
| 23. | | X |
| 24. | | X |
| 25. | | X |
| 26. | | X |
| 27. | X | |
| F. PROCEDURAL STANDARDIZATION (Low ... High) | Low | High |
| 28. | X | |
| 29. | X | |
| 30. | X | |
| 31. | X | |

Each item was rated in accord with the rating scales shown in Part 3 of the questionnaire (Appendix A).

The interpretations of the rating responses for the thirty one items that determined the four linkage dimensions are also shown in Part 3 of the questionnaire (Appendix A).

### Sub-Problem 1.2

Was there formal or informal coordination of students' clinical practice between the Medical Training Centre and the Mathari hospital in the department of occupational therapy?

### Findings on the Formalization of the Relationship

The formalization dimension had two indicators: (1) formal agreements and (2) formal coordination. The first indicator was assessed by five items and the second indicator was assessed by one item.

Items 1, 2 and 3 showed that there were informal agreements between the departments of occupational therapy in the Medical Training Centre and in the Mathari hospital. However, items 4 and 5 revealed that there were formal agreements between the tutors and the clinical instructors on matters relating to students' clinical practice. Item 6 indicated that there was a formal coordinator (clinical instructor) who supervised students during clinical practice.

## PROBLEM 2: INTENSITY

### Sub-Problem 2.1

What was the frequency of interactions between the Medical Training Centre and the Mathari hospital in the department of occupational therapy?

### Sub-Problem 2.2

What were the relative resource commitments between the Mathari hospital and the Medical Training Centre in the department of occupational therapy?

## Findings on Intensity of the Relationship

Marrett (1971) identified two indicators of intensity between organizations: (1) frequency of interaction and (2) relative resource commitment. These two indicators were used in this study.

Items 7, 8, 10 and 11 showed a high frequency of interaction between the Medical Training Centre and the Mathari hospital, whereby items 9, 12 and 13 revealed that: (1) students did not attend classes during clinical practice, (2) clinical instructors were not involved in the instruction of students at the Medical Training Centre and (3) tutors did not receive assistance from the clinical instructors in developing courses or goals of clinical practice respectively.

The second indicator of intensity of relationship was assessed by items 14 through 18. Item 14 indicated that there was money incurred by the hospital during students' clinical practice. The money was available from other accounts. Item 15 showed that four or more students were provided with facilities for clinical practice in Mathari hospital. This was an indication of high resource commitment from the Medical Training Centre to the hospital since students provided some professional services during their clinical practice. Item 16 revealed that the clinical instructors did not teach any courses at the Medical Training Centre and Item 17 indicated that two tutors were involved in the supervision of students' clinical practice. It was reported from the interview that the tutors visited the students twice a week during clinical practice. Item 18 showed that therapeutic equipment and materials were ordered once or twice a year when students were in clinical practice. However, since the money allocated for the purchase of equipment and materials was reported to be limited, this was considered an indicator of low resource commitment.

## PROBLEM 3: RECIPROCITY

### Sub-Problem 3.1

Were there unilateral or bilateral exchanges of resources between the Medical Training Centre and the Mathari hospital in the department of occupational therapy?

### Sub-Problem 3.2

Were the conditions of resource exchanges between the Medical Training Centre and the Mathari hospital in the department of occupational therapy mutually agreed upon?

### Findings on Reciprocity of the Relationship

Two indicators were used to determine the reciprocity dimension. These were: (1) resource reciprocity and (2) definitional reciprocity. Three items assessed resource reciprocity and six items assessed definitional reciprocity between the departments of occupational therapy and the Medical Training Centre and at the Mathari hospital.

Items 19 and 20 revealed that there was no sharing of funds and no exchange of therapeutic equipment and materials when students were in clinical practice between the Medical Training Centre and the Mathari hospital. However, Item 21 indicates that there was a bilateral exchange of information and ideas between the two departments when students were in clinical practice.

Items 22 through 27 were used to determine definitional reciprocity. Item 22 showed that there was some agreement on the sharing and exchange of information and ideas between the tutors and the clinical instructors. The information from the interview revealed that the clinical instructors provided the tutors with information on students' progress during clinical practice quite often. However, the interview information indicated that there was role conflict between the department head and the clinical instructors in evaluating students' performance during clinical practice but the clinical instructors appeared to disagree with the information provided in the interview.

Items 23, 24, 25 and 26 revealed that there were unilateral decisions on the exchange and sharing of (1) clinical instructors, (2) equipment and materials, (3) tutors and (4) the referral of patients The interview information regarding the unilateral decisions indicated that the decisions were made by the tutors. Item 27 revealed that there were mutual agreements on the sharing of physical facilities in the hospital by the tutors and students.

## PROBLEM 4: STANDARDIZATION

### Sub-Problem 4.1

To what extent were the rules, regulations and procedures for carrying out transactions between the Medical Training Centre and the Mathari hospital in the department of occupational therapy clearly defined?

### Findings on Standardization of the Relationship

Marrett (1971:94) indicated that the standardization of exchanges of resources between organizations may be measured by the fixedness of units of exchange and the fixedness of procedures for exchange. In this study the second indicator of standardization (procedural standardization) was used. Four items were used to assess procedural standardization between the occupational therapy department at the Medical Training Centre and at the Mathari hospital.

Item 28 indicated that there were no specific written procedures, rules and regulations which clearly delineated interrelationships between the Medical Training Centre and the hospital when students were in clinical practice. Items 29, 30 and 31 revealed that there was a low procedural standardization between the two departments. The job descriptions for third year occupational therapy students and for clinical instructors were reported to be generally understood.

## EFFECTIVENESS AND IDEAL IMPORTANCE OF BROAD GOAL STATEMENTS OF CLINICAL PRACTICE

This section of the chapter will present the respondents' perceptions on the effectiveness of clinical practice and the ideal importance of broad goal statements for clinical practice in Mathari hospital.

The analysis of data is based on sub-problem 5.1 and 6.1 that were formulated in Chapter 1. The data on sub-problem 5.1 deals with the effectiveness of clinical practice and the data on sub-problem 6.1

deals with the ideal importance of broad goal statements of clinical practice.

## EFFECTIVENESS

### Sub-Problem 5.1

What were the perceptions of the occupational therapy respondents on the effectiveness of clinical practice in the Mathari hospital?

### Findings on Effectiveness

Table 6.2 presents the data on the respondents' perceptions of effectiveness of clinical practice in Mathari hospital. The number of respondents, the rank orders, the mean scores and the standard deviations are shown. The mean scores were used as the basis of rank ordering.

The two highest and the two lowest mean scores of effectiveness are underlined. The results indicate that the mean ratings of effectiveness ranged from 2.72 to 3.50 indicating effectiveness was perceived to be "fair" and "poor". The attainment of goal statements that were ranked 1, 2, 3, 4, 5 and 6 were perceived to be "fair" and the only goal statement that was ranked 7 was perceived to be "poor". Since only one effectiveness variable had a mean rating of more than 3.50, the effectiveness of clinical practice in Mathari hospital was considered to be "fair".

Table 6.2

## RESPONDENTS' PERCEPTIONS OF EFFECTIVENESS OF CLINICAL PRACTICE IN MATHARI HOSPITAL

| | Broad Goal Statement | N | $\overline{X}$ | SD | Rank Order |
|---|---|---|---|---|---|
| | Section A | | | | |
| 1. | Providing the students with the opportunities of evaluating patients. | 20 | 3.49* | 1.0 | 6 |
| | Section B | | | | |
| 2. | Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | 20 | 3.34 | 0.98 | 4 |
| | Section C | | | | |
| 3. | Providing the students with the opportunities of broadening their medical knowledge and terminology. | 20 | 3.40 | 0.68 | 5 |
| | Section D | | | | |
| 4. | Providing the students with the opportunities of using themselves as therapeutic media. | 20 | 2.72* | 0.90 | 1 |
| | Section E | | | | |
| 5. | Providing the students with the opportunities of developing communication skills. | 20 | 3.50* | 1.0 | 7 |
| | Section F | | | | |
| 6. | Providing the students with the opportunities of developing professional attitudes. | 20 | 3.12* | 1.11 | 2 |
| | Section G | | | | |
| 7. | Providing the students with the opportunities of performing administrative functions. | 20 | 3.26 | 0.89 | 3 |

Interpretation of the Effectiveness Scale: 1-1.49 = very good; 1.50-2.49 = good; 2.50-3.49 = fair; 3.50-4.49 = poor; 4.50-5 = very poor.

*Underlined entries: ____ indicates the two lowest means and ---- indicates the two highest means for effectiveness.

# PROBLEM 6: IDEAL IMPORTANCE OF BROAD GOAL STATEMENTS OF CLINICAL PRACTICE

## Sub-Problem 6.1

What were the perceptions of the occupational therapy respondents on the ideal importance of broad goal statements of clinical practice in the Mathari hospital?

## Findings on Ideal Importance of Broad Goal Statements

Table 6.3 presents the data on the ideal importance of broad goal statements in Mathari hospital. The number of respondents, the mean scores, the standard deviations and the rank orders are shown for the ideal importance variables. The mean scores were the basis for rank ordering.

The two lowest and the two highest mean scores for ideal importance of broad goal statements are underlined. The results indicate that the mean ratings for ideal importance of goal statements ranged from 1.49 to 1.71 indicating that one goal was perceived to be very important and the remaining six goals were perceived to be "important" by the twenty respondents.

The two goal statements that had the lowest mean ratings and were perceived to be more important were: (1) ". . . providing the students with the opportunities of developing professional attitudes" and (2) ". . . providing the students with the opportunities of using themselves as therapeutic media."

The two goal statements that had the highest mean ratings for ideal importance and were perceived to be "important" were:

## Table 6.3

## RESPONDENTS' PERCEPTIONS OF IDEAL IMPORTANCE OF BROAD GOALS CLINICAL PRACTICE IN MATHARI HOSPITAL

| Broad Goal Statement | N | $\overline{X}$ | SD | Rank Order |
|---|---|---|---|---|
| Section A | | | | |
| 1. Providing the students with the opportunities of evaluating patients. | 20 | 1.61 | 0.41 | 4 |
| Section B | | | | |
| 2. Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | 20 | 1.63 | 0.33 | 5 |
| Section C | | | | |
| 3. Providing the students with the opportunities of broadening their medical knowledge and terminology. | 20 | 1.68* | 0.40 | 6 |
| Section D | | | | |
| 4. Providing the students with the opportunities of using themselves as therapeutic media. | 20 | 1.50* | 0.49 | 2 |
| Section E | | | | |
| 5. Providing the students with the opportunities of developing communication skills. | 20 | 1.71* | 0.37 | 7 |
| Section F | | | | |
| 6. Providing the students with the opportunities of developing professional attitudes. | 20 | 1.49* | 0.53 | 1 |
| Section G | | | | |
| 7. Providing the students with the opportunities of performing administrative functions. | 20 | 1.57 | 0.25 | 3 |

Interpretation of the Ideal Importance Scale: 1-1.49 = very important; 1.50-2.49 = important; 2.50-3.49 = moderately important; 3.50-4.49 = of little importance; 4.50-5 = not important.

*Underlined entries: ____ indicates the two lowest means and ---- indicates the two highest means for ideal importance of goals.

(1) ". . . providing the students with the opportunities of broadening their medical knowledge and terminology" and ". . . providing the students with the opportunities of developing communication skills." These two goal statements were ranked 6 and 7 respectively.

### Further Analysis

An examination of the mean scores for effectiveness and ideal importance of broad goal statements revealed that the goal statements that were ranked 1, 2 and 3 on the ideal importance scale appeared to be effectively attained. Thus, the goals that were perceived to be "more important" were better attained during clinical practice.

## SUMMARY

This chapter presented data analysis on (1) linkage dimensions, (2) effectiveness and (3) ideal importance of broad goal statements in Mathari hospital. Table 6.4 presents a summary of the linkage dimensions that were found in the Mathari hospital in the department of occupational therapy.

The first linkage dimension that was studied was formalization. This linkage dimension had two indicators: (1) formal agreements and (2) formal coordination. The first indicator was found to be informal although it was reported that during students' clinical practice there were some written communications between the clinical instructors and the tutors. The second indicator was found to be formal. There were clinical instructors who supervised students during clinical practice.

## TABLE 6.4

## PROFILE OF LINKAGE DIMENSIONS FOUND IN MATHARI HOSPITAL

| LINKAGE DIMENSION | DEPARTMENT |
|---|---|
| | OCCUPATIONAL THERAPY |
| A. FORMALIZATION OF THE RELATIONSHIP | |
| a. Formal Agreement Written ... Informal | Informal agreements<br>Formal agreements |
| b. Coordination (formal coordination ... informal) | Formal coordination |
| B. INTENSITY OF RELATIONSHIP | |
| a. Frequency of Interaction (High ... Low) | High |
| b. Relative Resource Commitment (High ... Low) | Low |
| C. RECIPROCITY OF RELATIONSHIP | |
| a. Resource Reciprocity (Bilateral ... Unilateral exchange) | Unilateral and bilateral exchange |
| b. Definitional Reciprocity (Mutual agreement ... Unilateral decision) | Unilateral decision |
| D. PROCEDURAL STANDARDIZATION (High ... Low) | Low |

The second linkage dimension that was examined was intensity of relationship. This linkage dimension had two indicators: (1) frequency of interaction and (2) relative resource commitment. The first indicator was found to be high and the second one was found to be low. It was reported that the tutors visited the students twice a week and this accounted for the high frequency of interaction.

The third linkage dimension that was considered was the reciprocity of the relationship. Two indicators of reciprocity were examined. The first indicator was resource reciprocity and the second one was definitional reciprocity. The first indicator was found to be both unilateral and bilateral. It was revealed in the interview that there was unilateral exchange of therapeutic equipment and materials from the hospital to the Medical Training Centre for learning purposes. However, there were bilateral exchanges of resources e.g. information and ideas when students were in clinical practice. The second indicator of reciprocity revealed that in some cases there were unilateral decisions on matters related to students' clinical practice.

The final linkage dimension that was studied was standardization. This linkage dimension had one indicator that was found to be low between the Medical Training Centre and the Mathari hospital.

The second section of the chapter presented data analysis on effectiveness and the ideal importance of broad goal statements of clinical practice. The mean ratings of effectiveness ranged from 2.72 to 3.50 indicating clinical practice in the Mathari hospital was perceived to be "fair" and "poor". However, since only one effectiveness variable had a mean rating of more than 3.49 the effectiveness of clinical practice was considered to be "fair".

The findings on the ideal importance of broad goals of clinical practice revealed that one goal was perceived to be "very important". The remaining six goals of clinical practice were perceived to be "important". Their mean ratings ranged from 1.49 to 1.71 according to the scale used.

## CHAPTER 7

# DESCRIPTION AND ANALYSIS OF DATA OF THE NYANZA GENERAL HOSPITAL

This chapter presents a brief description of the departments of occupational therapy and physiotherapy and the analysis of data on (1) linkage dimensions, (2) effectiveness and (3) ideal importance of broad goal statements of clinical practice.

The department of physiotherapy was established in the Nyanza provincial hospital in 1949 and about 1900 patients are treated by six physiotherapists each year. The department of occupational therapy was established in 1975 and about 889 patients are treated by three occupational therapists yearly.

The analysis of data on linkage dimensions will be presented following the order of sub-problems that were formulated in Chapter 1 under the headings of formalization, intensity, reciprocity and standardization. A summary of the linkage dimensions is presented at the end of this chapter and the rating responses for the thirty one items that were used to determine the four linkage dimensions are shown in Table 7.1.

## PROBLEM 1: FORMALIZATION

### Sub-Problem 1.1

Were there formal or informal agreements between the Medical Training Centre and the Nyanza provincial hospital in the departments of physiotherapy and occupational therapy?

## TABLE 7.1

## SUMMARY OF RATING RESPONSES ON THIRTY ONE LINKAGE INDICATORS IN THE DEPARTMENTS OF OCCUPATIONAL THERAPY AND PHYSIOTHERAPY IN THE NYANZA GENERAL HOSPITAL

| | DEPARTMENT | | | |
|---|---|---|---|---|
| LINKAGE INDICATORS | OCCUPATIONAL THERAPY | | PHYSIOTHERAPY | |
| A. FORMALIZATION | Formal | Informal | Formal | Informal |
| a) Formal Agreement (Written ... Informal) | | | | |
| Item | | | | |
| 1. | | X | | X |
| 2. | | X | | X |
| 3. | | X | | X |
| 4. | X | | X | |
| 5. | X | | X | |
| b) Coordination (Formal ... Informal) | Formal | Informal | Formal | Informal |
| 6. | X | | | X |
| B. FREQUENCY OF INTERACTION (Low ... High) | Low | High | Low | High |
| 7. | X | | X | |
| 8. | X | | X | |
| 9. | n/a | | n/a | |
| 10. | | X | | X |
| 11. | | X | | X |
| 12. | n/a | | n/a | |
| 13. | n/a | | n/a | |
| C. RELATIVE RESOURCE COMMITMENT (Low ... High) | Low | High | Low | High |
| 14. | X | | X | |
| 15. | X | | X | |
| 16. | n/a | | n/a | |
| 17. | X | | | X |
| 18. | X | | X | |
| D. RESOURCE RECIPROCITY (Unilateral ... Bilateral Exchange) | Unilateral | Bilateral | Unilateral | Bilateral |
| 19. | n/a | | n/a | |
| 20. | n/a | | n/a | |
| 21. | X | | X | |
| E. DEFINITIONAL RECIPROCITY (Mutual Agreement ... Unilateral Decision) | Mutual | Unilateral | Mutual | Unilateral |
| 22. | X | | X | |
| 23. | X | | n/a | |
| 24. | X | | X | |
| 25. | X | | X | |
| 26. | n/a | | n/a | |
| 27. | X | | X | |
| F. PROCEDURAL STANDARDIZATION (Low ... High) | Low | High | Low | High |
| 28. | X | | X | |
| 29. | X | | X | |
| 30. | X | | n/a | |
| 31. | X | | X | |

Each item was rated in accord with the rating scales shown in Part 3 of the questionnaire (Appendix A).

The interpretations of the rating responses for the thirty one items that determined the four linkage dimensions are also shown in Part 3 of the questionnaire (Appendix A).

### Sub-Problem 1.2

Was there formal or informal coordination of students' clinical practice between the Medical Training Centre and the Nyanza provincial hospital in the departments of physiotherapy and occupational therapy?

### Findings on the Formalization of the Relationship

The formalization dimension had two indicators: (1) formal agreements and (2) formal coordination. The first indicator was assessed by five items and the second indicator was assessed by one indicator.

Items 1, 2 and 3 indicated that there were informal agreements between the Medical Training Centre and the Nyanza hospital in the departments of physiotherapy and occupational therapy. However, Items 4 and 5 revealed that there were formal agreements between the department heads in the hospitals and the senior tutors at the Medical Training Centre on matters relating to changes in procedures when students were in clinical practice.

Item 6 revealed that there was a formal coordinator (clinical instructor) in the department of occupational therapy whereby in the department of physiotherapy there was informal coordination of students' clinical practice. The staff therapists in the department of physiotherapy felt that a formal clinical instructor would be helpful to the students during clinical practice.

## PROBLEM 2: INTENSITY

### Sub-Problem 2.1

What was the frequency of interactions between the Medical Training Centre and the Nyanza provincial hospital in the departments

of physiotherapy and occupational therapy?

### Sub-Problem 2.2

What were the relative resource commitments between the Medical Training Centre and the Nyanza provincial hospital in the departments of occupational therapy and physiotherapy?

### Findings on the Intensity of the Relationship

Two indicators were used for the intensity of relationship in this study. These were: (1) frequency of interactions and (2) relative resource commitments. Seven items were used to determine frequency of interactions and five items were used to assess the relative resource commitments between the Medical Training Centre and the Nyanza provincial hospital in the departments of physiotherapy and occupational therapy.

Items 7 and 8 revealed a low frequency of interaction between the hospital and the Medical Training Centre in the two departments. Items 10 and 11 indicated a high frequency of interaction between the hospital and the Medical Training Centre in the two professions. The information from the interviews revealed that the students, the tutors and the department heads in the two professions communicated at least once or twice in a month on matters related to students' clinical practice. Items 12 and 13 were not applicable between the Medical Training Centre and the Nyanza general hospital. However, the department heads indicated that their involvement in developing the goals of clinical practice would be useful to students during clinical practice.

Items 14 through 18 assessed the relative resource commitments between the Medical Training Centre and the Nyanza hospital. Item 14 showed that there was a specific budget in each department for the purchase of therapeutic equipment and materials. However, it was reported that the money was limited for the needs of the two departments. Item 15 revealed that two occupational therapy and two physiotherapy students were provided with facilities for clinical practice in the Nyanza provincial hospital. This was an indication of a low resource commitment from the Medical Training Centre. Item 16 showed that there were no clinical instructors from this hospital who taught courses at the Medical Training Centre. Item 17 indicated a medium relative resource commitment in the department of occupational therapy but a high resource commitment in the department of physiotherapy.

Item 18 showed that there was a low resource commitment in the two departments since the hospital ordered limited therapeutic equipment and materials. The interview information revealed that there was a need for better and more therapeutic equipment and materials in the two departments. A department head pointed out:

> . . . sometimes students have very good ideas on new treatment and evaluation techniques but the lack of therapeutic equipment and materials limit the application of their skills in the clinical setting.

Thus, Item 18 indicated a low relative resource commitment from the hospital.

## PROBLEM 3: RECIPROCITY

### Sub-Problem 3.1

Were there unilateral or bilateral exchanges of resources between the Medical Training Centre and the Nyanza general hospital in the departments of physiotherapy and occupational therapy?

## Sub-Problem 3.2

Were the conditions of resource exchanges between the Medical Training Centre and the Nyanza general hospital mutually agreed upon in the departments of occupational therapy and physiotherapy?

## Findings on the Reciprocity of the Relationship

In this study two indicators of reciprocity were used. These were: (1) resource reciprocity and (2) definitional reciprocity. Items 19 - 21 were used to determine resource reciprocity and items 22 - 27 were used to determine definitional reciprocity between the Medical Training Centre and the Nyanza hospital.

Items 19 and 20 revealed that there was no exchange or sharing of funds, therapeutic equipment and materials in the two departments. It was reported in the interview that the nature of therapeutic equipment and materials, and the organizational structure did not allow the exchange or sharing of such resources between the two organizations. Item 21 showed that there were bilateral exchanges of information and ideas between Medical Training Centre and the Nyanza hospital in the two departments when students were in clinical practice.

Items 22 - 27 assessed definitional reciprocity. Item 22 revealed that there were mutual agreements on the sharing of information in the two departments. However, Item 23 indicated that there was some agreement on the role of clinical instructors and department heads although the department heads felt that the role of clinical instructors was not well defined. It was reported that sometimes there was role conflict between the department heads and clinical instructors. This happened during the final evaluations of students during clinical practice. Item 25 showed that there were mutual agreements on the involvement of tutors in clinical practice as consultants during students' clinical practice. It was reported in the interview that it would be useful to the students if tutors could spend more time with students in the clinical settings. Such arrangements would allow the students and the tutors to apply the skills learned in the school to a clinical setting. Item 26 revealed that no patients were referred to the Medical Training Centre for students' learning purposes. Item 27 indicated that there were mutual agreements between the tutors and the hospital staff in the sharing of physical facilities in the two departments by tutors and students during clinical practice.

## PROBLEM 4: STANDARDIZATION

### Sub-Problem 4.1

To what extent were the rules, regulations and procedures for carrying out transactions between the Medical Training Centre and the Nyanza hospital in the departments of physiotherapy and occupational therapy clearly defined?

### Findings on the Standardization of the Relationship

Marrett (1971:94) indicated two indicators of standardization of exchanges of resources between organizations. These were: (1) the fixedness of units of exchange and (2) the fixedness of procedures for exchange. In this study the second indicator (procedural standardization) was used. Four items were used to determine procedural standardization of resource exchanges between the Medical Training Centre and the

Nyanza hospital.

Item 28 revealed that the rules, regulations and procedures between the Medical Training Centre and the hospital in the two departments were generally understood. Item 29 showed that the job descriptions for third year students in the department of occupational therapy were well written. However, in the department of physiotherapy the job descriptions for third year students were reported to be poorly written. Item 30 was not applicable in the department of physiotherapy. However, this item indicated that the job descriptions of clinical instructors were poorly written. In the department of physiotherapy, the responsibility of supervising students during clinical practice was carried out by the department head or by qualified therapist who were delegated the responsibility by the department head. Item 31 showed that in the two departments the guidelines which specified the exchanges of resources between the hospital and the Medical Training Centre were generally understood.

## EFFECTIVENESS AND IDEAL IMPORTANCE OF BROAD GOAL STATEMENTS OF CLINICAL PRACTICE

This section of the chapter presents both the occupational therapy and physiotherapy respondents' perceptions on the effectiveness and the ideal importance of broad goal statements of clinical practice in Nyanza general hospital. The analysis of the data is based on sub-problems 5.1 and 6.1 that were formulated in Chapter 1. The data on sub-problem 5.1 deals with the effectiveness and the data on sub-problem 6.1 deals with the ideal importance of broad goal statements of clinical practice.

## EFFECTIVENESS

### Sub-Problem 5.1

What were the perceptions of both the occupational therapy and physiotherapy respondents' on the effectiveness of clinical practice in the Nyanza general hospital?

### Findings on Effectiveness

Table 7.2 presents the data on the effectiveness of clinical practice in the Nyznza provincial general hospital. The number of respondents, the rank orders, the mean scores and the standard deviations are shown. The mean scores were the basis for rank ordering.

The two highest and the two lowest means scores of effectiveness are underlined. The results indicate that the mean ratings for effectiveness ranged from 2.21 to 3.08 indicating effectiveness was perceived to be "good" and "fair".

The attainment of goal statements that were ranked 1, 2 and 3 were perceived to be "good" and the attainment of goal statements that were ranked 4, 5, 6 and 7 were perceived to be fair. The two goal statements that had the "lowest" mean scores were: (1) ". . . providing the students with the opportunities of using themselves as therapeutic media" and (2) ". . . providing the students with the opportunities of developing professional attitudes."

The two goal statements that had the highest mean scores were: (1) ". . . providing the students with the opportunities of evaluating patients" and (2) ". . . providing the students with the opportunities

## Table 7.2

## RESPONDENTS' PERCEPTIONS OF EFFECTIVENESS OF CLINICAL PRACTIVE IN NYANZA GENERAL HOSPITAL

| | Broad Goal Statement | N | $\overline{X}$ | SD | Rank Order |
|---|---|---|---|---|---|
| | Section A | | | | |
| 1. | Providing the students with the opportunities of evaluating patients. | 13 | 3.05* | 0.97 | 6 |
| | Section B | | | | |
| 2. | Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | 13 | 3.08* | 0.87 | 7 |
| | Section C | | | | |
| 3. | Providing the students with the opportunities of broadening their medical knowledge and terminology. | 13 | 2.85 | 0.75 | 5 |
| | Section D | | | | |
| 4. | Providing the students with the opportunities of using themselves as therapeutic media. | 12 | 2.21* | 0.80 | 1 |
| | Section E | | | | |
| 5. | Providing the students with the opportunities of developing communication skills. | 13 | 2.76 | 0.78 | 3 |
| | Section F | | | | |
| 6. | Providing the students with the opportunities of developing professional attitudes. | 13 | 2.36* | 0.70 | 2 |
| | Section G | | | | |
| 7. | Providing the students with the opportunities of performing administrative functions. | 13 | 2.77 | 0.73 | 4 |

Interpretation of the Effectiveness Scale: 1-1.49 = very good; 1.50-2.49 = good; 2.50-3.49 = fair; 3.50-4.49 = poor; 4.50-5 = very poor.

*Underlined entries: ____ indicates the two lowest means and ---- indicates the two highest means for effectiveness.

of formulating aims of treatment and carrying out treatment.

## PROBLEM 6: IDEAL IMPORTANCE OF BROAD GOAL STATEMENTS OF CLINICAL PRACTICE

### Sub-Problem 6.1

What were the perceptions of both the occupational therapy and physiotherapy respondents on the ideal importance of broad goal statements of clinical practice in the Nyanza general hospital?

### Findings on the Ideal Importance of Broad Goal Statements

Table 7.3 presents the data on the ideal importance of broad goal statements in Nyanza provincial hospital. The number of respondents, the mean scores, the standard deviations and the rank orders are shown. The mean scores were the basis for rank ordering.

The two lowest and the two highest mean scores are underlined. The results indicate that the mean ratings for the ideal importance of broad goal statements in the Nyanza hospital ranged from 1.39 to 1.90 indicating two goals were perceived to be "very important" and the remaining five goals were perceived to be "important".

The two goal statements that were perceived to be very important and had the "lowest" mean scores were: (1) ". . . providing the students with the opportunities of developing professional attitudes" and (2) ". . . providing the students with the opportunities of using themselves as therapeutic media".

The two goal statements that had the highest mean scores and were perceived to be "important" were; (1) ". . . providing the students with the opportunities of formulating aims of treatment and

## Table 7.3

## RESPONDENTS' PERCEPTIONS OF IDEAL IMPORTANCE OF BROAD GOALS OF CLINICAL PRACTICE IN NYANZA GENERAL HOSPITAL

| | Broad Goal Statement | N | $\overline{X}$ | SD | Rank Order |
|---|---|---|---|---|---|
| | Section A | | | | |
| 1. | Providing the students with the opportunities of evaluating patients. | | 1.62 | 0.24 | 5 |
| | Section B | | | | |
| 2. | Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | 13 | 1.66* | 0.28 | 6 |
| | Section C | | | | |
| 3. | Providing the students with the opportunities of broadening their medical knowledge and terminology. | 13 | 1.56 | 0.40 | 4 |
| | Section D | | | | |
| 4. | Providing the students with the opportunities of using themselves as therapeutic media. | 12 | 1.46* | 0.31 | 2 |
| | Section E | | | | |
| 5. | Providing the students with the opportunities of developing communication skills. | 13 | 1.55 | 0.41 | 3 |
| | Section F | | | | |
| 6. | Providing the students with the opportunities of developing professional attitudes. | 13 | 1.39* | 0.31 | 1 |
| | Section G | | | | |
| 7. | Providing the students with the opportunities of performing administrative functions. | 13 | 1.90* | 0.30 | 7 |

Interpretation of the Ideal Importance Scale: 1-1.49 = very important; 1.50-2.49 = important; 2.50-3.49 = moderately important; 3.50-4.49 = of little importance; 4.50-5 = not important.

*Underlined entries: ____ indicates the two lowest means and ---- indicates the two highest means for ideal importance of goals.

carrying out treatment" and (2) ". . . providing the students with the opportunities of performing administrative functions".

## Further Analysis

An examination of the mean scores for the effectiveness of the ideal importance of broad goal statements revealed some interesting results. The results in Table 7.2 and 7.3 showed that the goal statements that were perceived to be more important and had the lowest mean scores on the ideal importance scale were perceived to be better attained compared to the other goal statements. For example, the goal statements that were ranked 1, 2 and 3 on the ideal importance scale in Table 7.3 were ranked 2, 1 and 3 respectively on the effectiveness scale in Table 7.2.

## SUMMARY

This chapter has presented analysis of data on (1) linkage dimensions, (2) effectiveness and (3) ideal importance of broad goal statements of clinical practice in the Nyanza general hospital. Table 7.4 presents the linkage dimensions that were found in the Nyanza provincial hospital in the departments of occupational therapy and physiotherapy.

The first linkage dimension that was studied was formalization. This linkage dimension had two indicators: (1) formal agreements and (2) formal coordination. The first indicator was found to be informal in the two departments and the second indicator was found to be formal in the department of occupational therapy but informal in the department of physiotherapy. In the department of occupational therapy there was a formal clinical instructor who supervised students during clinical practice whereby in the department of physiotherapy the responsibility of coordinating the students' clinical activities was carried out by the department head or by a qualified therapist.

The second linkage dimension that was examined was the intensity of the relationship. This linkage dimension had two indicators also: (1) frequency of interaction and (2) relative resource commitment. In the two departments it was revealed that there was a low to medium frequency of interaction between the Medical Training Centre and the hospital. The communication between the tutors and the department heads was found to be low but the communication between the students and the tutors was found to be medium according to the scale used. The second indicator of the intensity of the relationship between the Medical Training Centre and the hospital was found to be low in the departments of physiotherapy and occupational therapy.

The third linkage dimension that was considered was reciprocity. The two indicators of reciprocity dimension that were examined were: (1) resource reciprocity and (2) definitional reciprocity. The first indicator was found to vary in the two departments. Some items indicated a bilateral and unilateral exchanges of resources between the two organizations. Although, there were bilateral and unilateral exchanges of resources, the exchanges appear to be low. The second indicator of reciprocity that was examined was definitional reciprocity. This indicator revealed mutual agreements in the two departments for the exchanges of resources that were involved.

The final linkage dimension that was examined was procedural standardization. This linkage dimension was found to be low in the two departments in Nyanza hospital.

The second section of this chapter presented data on effectiveness and ideal importance of broad goal statements of clinical practice. The effectiveness of clinical practice was perceived to be "good" and "fair" since the mean ratings for effectiveness ranged from 2.21 to 3.08 according to the scale used.

The ideal importance of the broad goal statements was perceived to be "very important" and "important" with mean scores ranging from 1.39 to 1.90 indicating some goals were perceived to be "very important" and others were perceived to be "important".

## TABLE 7.4

## PROFILE OF LINKAGE DIMENSIONS FOUND IN NYANZA GENERAL HOSPITAL

| LINKAGE DIMENSION | DEPARTMENT | |
|---|---|---|
| | OCCUPATIONAL THERAPY | PHYSIOTHERAPY |
| A. FORMALIZATION OF THE RELATIONSHIP | | |
| a. Formal Agreement Written ... Informal | Informal | Informal |
| b. Coordination (formal coordination ... informal) | Formal | Informal |
| B. INTENSITY OF RELATIONSHIP | | |
| a. Frequency of Interaction (High ... Low) | Low ... Medium | Low ... Medium |
| b. Relative Resource Commitment (High ... Low) | Low | Low |
| C. RECIPROCITY OF RELATIONSHIP | | |
| a. Resource Reciprocity (Bilateral ... Unilateral exchange) | Bilateral and Unilateral exchange | Bilateral and Unilateral exchange |
| b. Definitional Reciprocity (Mutual agreement ... Unilateral decision) | Mutual agreement | Mutual agreement |
| D. PROCEDURAL STANDARDIZATION (High ... Low) | Low | Low |

# CHAPTER 8

# DESCRIPTION AND ANALYSIS OF DATA OF THE NYERI PROVINCIAL GENERAL HOSPITAL

The purpose of this chapter is to provide a brief description of the departments of occupational therapy and physiotherapy in the Nyeri general hospital and to present the analysis of data on linkage dimensions, effectiveness and the ideal importance of broad goals of clinical practice in the Nyeri provincial hospital.

The department of physiotherapy was established in 1956 and the department of occupational therapy was opened in 1974. Approximately 16,000 patients are treated annually in the department of physiotherapy by six physiotherapists and about 1093 patients are treated annually in the department of occupational therapy by three occupational therapists.

The analysis of data on linkage dimensions are presented following the order of sub-problems that were formulated in Chapter 1 under the headings of formalization, intensity, reciprocity and standardization of the relationship between the two organizations. A summary of linkage dimensions that were found in the two departments in the Nyeri provincial hospital is presented at the end of this chapter. The rating responses for the thirty one items that were used to determine the four linkage dimensions in the departments of occupational therapy and physiotherapy at the Nyeri Provincial hospital are presented in Table 8.1.

## PROBLEM 1: FORMALIZATION

### Sub-Problem 1.1

Were there formal or informal agreements between the Medical

## TABLE 8.1

## SUMMARY OF RATING RESPONSES ON THIRTY ONE LINKAGE INDICATORS IN THE DEPARTMENTS OF OCCUPATIONAL THERAPY AND PHYSIOTHERAPY IN THE NYERI PROVINCIAL HOSPITAL

| | DEPARTMENT | | | |
|---|---|---|---|---|
| LINKAGE INDICATORS | OCCUPATIONAL THERAPY | | PHYSIOTHERAPY | |
| A. FORMALIZATION | Formal | Informal | Formal | Informal |
| a) Formal Agreement (Written ... Informal) | | | | |
| Item | | | | |
| 1. | | X | | X |
| 2. | | X | | X |
| 3. | | X | | X |
| 4. | X | | X | |
| 5. | X | | X | |
| b) Coordination (Formal ... Informal) | Formal | Informal | Formal | Informal |
| 6. | X | | | X |
| B. FREQUENCY OF INTERACTION (Low ... High) | Low | High | Low | High |
| 7. | X | | X | |
| 8. | X | | X | |
| 9. | n/a | | n/a | |
| 10. | X | | X | |
| 11. | X | | X | |
| 12. | n/a | | n/a | |
| 13. | n/a | | n/a | |
| C. RELATIVE RESOURCE COMMITMENT (Low ... High) | Low | High | Low | High |
| 14. | X | | X | |
| 15. | X | | | X |
| 16. | n/a | | n/a | |
| 17. | X | | | X |
| 18. | | X | | X |
| D. RESOURCE RECIPROCITY (Unilateral ... Bilateral Exchange) | Unilateral | Bilateral | Unilateral | Bilateral |
| 19. | n/a | | n/a | |
| 20. | n/a | | n/a | |
| 21. | | X | | X |
| E. DEFINITIONAL RECIPROCITY (Mutual Agreement ... Unilateral Decision) | Mutual | Unilateral | Mutual | Unilateral |
| 22. | X | | X | |
| 23. | X | | X | |
| 24. | n/a | | n/a | |
| 25. | | X | | X |
| 26. | n/a | | n/a | |
| 27. | X | | X | |
| F. PROCEDURAL STANDARDIZATION (Low ... High) | Low | High | Low | High |
| 28. | X | | X | |
| 29. | | X | X | |
| 30. | X | | n/a | |
| 31. | X | | X | |

Each item was rated in accord with the rating scales shown in Part 3 of the questionnaire (Appendix A).

The interpretations of the rating responses for the thirty one items that determined the four linkage dimensions are also shown in Part 3 of the questionnaire (Appendix A).

Training Centre and the Nyeri hospital in the departments of physiotherapy and occupational therapy?

## Sub-Problem 1.2

Was there formal or informal coordination of students' clinical practice between the Medical Training Centre and the Nyeri provincial hospital in the departments of physiotherapy and occupational therapy?

## Findings on the Formalization of the Relationship

The formalization dimension was determined by five items that assessed formal agreements and by one item that assessed formal coordination of student clinical practice in the departments of physiotherapy and occupational therapy in the Nyeri provincial hospital.

Items 1, 2 and 3 showed that there were informal agreements between the Medical Training Centre and the hospital in the two departments. However, items 4 and 5 indicated that there were formal agreements in the two departments between the senior tutors and the department heads on matters relating to student clinical practice. Item 6 revealed that there was a formal coordinator (clinical instructor) in the department of occupational therapy whereby in the department of physiotherapy the responsibility of supervising students during clinical practice was carried out by the department head.

## PROBLEM 2: INTENSITY

## Sub-Problem 2.1

What were the frequency of interactions between the Medical

Training Centre and the Nyeri provincial hospital in the departments of occupational therapy and physiotherapy?

### Sub-Problem 2.2

What were the relative resource commitments between the Medical Training Centre and the Nyeri hospital in the departments of physiotherapy and occupational therapy?

### Findings on the Intensity of Relationship

Marrett (1971) identified the frequency of interaction and the relative resource commitments as the two indicators of intensity dimension. These two indicators were used in this study. Seven items were used to determine the frequency of interaction and five items were used to assess the relative resource commitments.

Items 7, 8, 10 and 11 revealed a low frequency of interaction in the two departments. Item 9 indicated that students did not attend classes while in clinical practice and Item 12 revealed that clinical instructors were not involved in the instruction of students at the Medical Training Centre in the two departments. Also, Item 13 showed that the tutors at the Medical Training Centre did not receive assistance from the clinical instructors or department heads in developing courses or goals of clinical practice in the two departments. However, the interviews revealed that the involvement of clinical instructors or department heads would benefit students during clinical practice.

Items 14 - 18 assessed the relative resource commitments in the two departments. Item 14 revealed that there was money for expenditure in the two departments when students were in clinical practice. However, there was no specific amount of money set aside for use by students when in clinical practice. Item 15 showed that there was a low resource commitment in the department of occupational therapy but a high resource commitment in the department of physiotherapy. Item 16 was not applicable in the two departments. It was reported that it was not economically feasible for clinical instructors or department heads to travel to the Medical Training Centre to teach. Item 17 revealed a low resource commitment in the department of occupational therapy but a high resource commitment in the department of physiotherapy. Item 18 indicated that the two departments had enough equipment and materials for the students while in clinical practice.

## PROBLEM 3: RECIPROCITY

### Sub-Problem 3.1

Were there unilateral or bilateral exchanges of resources between the Medical Training Centre and the Nyeri provincial hospital in the departments of occupational therapy and physiotherapy?

### Sub-Problem 3.2

Were the conditions of resource exchanges between MTC and the Nyeri Provincial hospital in the departments of occupational therapy and physiotherapy mutually agreed upon?

### Findings on the Reciprocity of the Relationship

Two indicators of reciprocity were used in this study. These were: (1) resource reciprocity and (2) definitional reciprocity. Three items were used to determine resource reciprocity and six items were used for definitional reciprocity.

Item 19 and 21 revealed that there were no exchange of funds and therapeutic equipment and materials respectively between the Medical Training Centre and the hospital in the two departments when students were in clinical practice. However, Item 21 indicated a bilateral exchange of information and ideas between the two organizations in the two departments when students were in clinical practice.

Items 22 - 27 were used to determine definitional reciprocity between the Medical Training Centre and the Nyeri provincial hospital. Items 22, 23 and 27 revealed that there were mutual agreements on the exchanges and sharing of information, clinical instructors and physical facilities between the two organizations in the departments of occupational therapy and physiotherapy. Items 24 and 26 were not applicable between the departments of physiotherapy. Item 25 revealed that there were some agreements on the exchange of tutors from the hospital to the Medical Training Centre in the two departments. However, it was reported that the selection procedures of tutors were not agreed upon by the physiotherapists. They felt that all the decisions regarding the selection of tutors in the department of physiotherapy were made at the Medical Training Centre.

## PROBLEM 4: STANDARDIZATION

### Sub-Problem 4.1

To what extent were the rules, regulations and procedures for carrying out transactions between the Medical Training Centre and the

Nyeri hospital clearly defined in the departments of occupational therapy and physiotherapy?

### Findings on Standardization of the Relationship

Two indicators of standardization of exchanges of resources between organizations were proposed by Marrett (1971:94). These were: (1) the fixedness of units of exchange and (2) the fixedness of procedures for exchange. The second indicator was used in this study. Four items (28 - 31) were used to determine procedural standardization. Items 28, 30 and 31 indicated a low procedural standardization between the Medical Training Centre and the Nyeri provincial hospital in the department of occupational therapy. However, Item 29 revealed a high procedural standardization in the department of occupational therapy. Items 28, 29 and 31 indicated a low procedural standardization in the department of physiotherapy and Item 30 was not applicable since there were no formal coordinators (clinical instructors) in the department of physiotherapy. It was reported that the department head was responsible for the supervision of students during clinical practice.

## EFFECTIVENESS AND IDEAL IMPORTANCE OF BROAD GOALS OF CLINICAL PRACTICE

This section of Chapter 8 presents the respondents' perceptions on the effectiveness of clinical practice and the ideal importance of broad goals of clinical practice in the departments of occupational therapy and physiotherapy in Nyeri general hospital.

The analysis of data is based on sub-problems 5.1 and 6.1 that were formulated in Chapter 1. The data on sub-problem 5.1 deals with the effectiveness of clinical practice and the data on sub-problem 6.1 deals with the ideal importance of broad goals of clinical practice.

## EFFECTIVENESS

### Sub-Problem 5.1

What were the perceptions of both the occupational therapy and physiotherapy respondents' in the effectiveness of clinical practice in Nyeri general hospital?

### Findings on Effectiveness

Table 8.2 presents data on the respondents' perceptions of effectiveness of clinical practice in Nyeri provincial hospital. The number of respondents, the mean scores, the standard deviations and the rank orders are shown. The mean scores were the basis of rank ordering.

The two lowest and the two highest mean scores of effectiveness are underlined in Table 8.2. The results indicate that the mean ratings of effectiveness ranged from 2.10 to 2.98 indicating that effectiveness of clinical practice in the Nyeri hospital was perceived to be "good" for three goals and "fair" for four goals.

The two goals that had the "lowest" mean scores and were perceived to be "good" on effectiveness were: (1) ". . . providing the students with the opportunities of using themselves as therapeutic media and (2) ". . . providing the students with the opportunities of performing administrative functions" respectively.

The two goals that had the "highest" mean scores on effectiveness

Table 8.2

RESPONDENTS' PERCEPTIONS OF EFFECTIVENESS OF CLINICAL PRACTICE IN NYERI GENERAL HOSPITAL

| | Broad Goal Statement | N | $\overline{X}$ | SD | Rank Order |
|---|---|---|---|---|---|
| | Section A | | | | |
| 1. | Providing the students with the opportunities of evaluating patients. | 10 | 2.81 | 0.73 | 4 |
| | Section B | | | | |
| 2. | Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | 10 | 2.87* | 0.79 | 6 |
| | Section C | | | | |
| 3. | Providing the students with the opportunities of broadening their medical knowledge and terminology. | 10 | 2.98* | 0.68 | 7 |
| | Section D | | | | |
| 4. | Providing the students with the opportunities of using themselves as therapeutic media. | 10 | 2.10* | 0.76 | 1 |
| | Section E | | | | |
| 5. | Providing the students with the opportunities of developing communication skills. | 10 | 2.35 | 0.61 | 3 |
| | Section F | | | | |
| 6. | Providing the students with the opportunities of developing professional attitudes. | 10 | 2.84 | 0.66 | 5 |
| | Section G | | | | |
| 7. | Providing the students with the opportunities of performing administrative functions. | 10 | 2.15* | 0.73 | 2 |

Interpretation of the Effectiveness Scale: 1-1.49 = very good; 1.50-2.49 = good; 2.50-3.49 = fair; 3.50-4.49 = poor; 4.50-5 = very poor.

*Underlined entries: ____ indicates the two lowest means and ---- indicates the two highest means for effectiveness.

were: (1) ". . . providing the students with the opportunities of broadening their medical knowledge and terminology" and (2) ". . . providing the students with the opportunities of formulating aims of treatment and carrying out treatment" respectively. The attainment of these goals was perceived to be "fair".

## PROBLEM 6:

## IDEAL IMPORTANCE OF BROAD GOALS OF CLINICAL PRACTICE

### Sub-Problem 6.1

What were the perceptions of both the occupational therapy and physiotherapy respondents in Nyeri provincial hospital on the ideal importance of broad goals of clinical practice?

### Findings on Ideal Importance of Broad Goals

In order to determine the respondents' perceptions of the ideal importance of broad goals they rated seventy skills pertaining to the seven broad goals on a five-point Likert-type scale. Table 8.3 presents the data on the respondents' perceptions of the ideal importance of broad goals in the Nyeri provincial hospital. The number of respondents, the mean scores, the standard deviations and the rank orders are presented in Table 8.3. The mean scores were the basis for rank ordering.

The two highest and the two lowest mean scores of ideal importance of broad goals of clinical practice are underlined. The results indicate that the mean ratings ranged from 1.45 to 1.99 indicating that six of the seven goals were perceived to be "important".

## Table 8.3

## RESPONDENTS' PERCEPTIONS OF IDEAL IMPORTANCE OF BROAD GOALS OF CLINICAL PRACTICE IN NYERI GENERAL HOSPITAL

| | Broad Goal Statement | N | $\bar{X}$ | SD | Rank Order |
|---|---|---|---|---|---|
| | Section A | | | | |
| 1. | Providing the students with the opportunities of evaluating patients. | 10 | 1.66* | 0.30 | 6 |
| | Section B | | | | |
| 2. | Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | 10 | 1.59 | 0.24 | 5 |
| | Section C | | | | |
| 3. | Providing the students with the opportunities of broadening their medical knowledge and terminology. | 10 | 1.58 | 0.29 | 4 |
| | Section D | | | | |
| 4. | Providing the students with the opportunities of using themselves as therapeutic media. | 10 | 1.50* | 0.34 | 2 |
| | Section E | | | | |
| 5. | Providing the students with the opportunities of developing communication skills. | 10 | 1.56 | 0.25 | 3 |
| | Section F | | | | |
| 6. | Providing the students with the opportunities of developing professional attitudes. | 10 | 1.45* | 0.37 | 1 |
| | Section G | | | | |
| 7. | Providing the students with the opportunities of performing administrative functions. | 10 | 1.99* | 0.30 | 7 |

Interpretation of the Ideal Importance Scale: 1-1.49 = very important; 1.50-2.49 = important; 2.50-3.49 = moderately important; 3.50-4.49 = of little importance; 4.50-5 = not important.

*Underlined entries: ____ indicates the two lowest means and ---- indicates the two highest means for ideal importance of goals.

The goal in Section F was perceived to be "very important".

The two goals that had the "lowest" mean scores were: (1) ". . . providing the students with the opportunities of developing professional attitudes" and (2) ". . . providing the students with the opportunities of using themselves as therapeutic media."

The two goals that had the highest mean scores on the ideal importance scale in the Nyeri provincial hospital were: (1) ". . . providing the students with the opportunities of performing administrative functions" and (2) ". . . providing the students with the opportunities of evaluating patients".

### Further Analysis of Data

An examination of the mean scores of effectiveness and ideal importance of goals of clinical practice revealed that the goals that were ranked 1 and 2 on the ideal importance scale were also ranked 2 and 1 respectively on the effectiveness scale. This indicated that the goals that were perceived to be "more important" compared to the other goals were better achieved during clinical practice.

## SUMMARY

This chapter has presented the analysis of data on (1) linkage dimensions, (2) effectiveness and (3) ideal importance of broad goals of clinical practice in the Nyeri provincial hospital.

Table 8.4 presents a summary of the linkage dimensions that were found in the Nyeri provincial hospital.

The first linkage dimension to be studied was formalization.

This linkage dimension was found to be informal on the first indicator in the departments of occupational therapy and physiotherapy since there was no existence of formal agreement between the Medical Training Centre and the hospital when students were in clinical practice.

The second indicator of formalization dimension was found to be formal in the department of occupational therapy but informal in the department of physiotherapy.

The second linkage dimension that was examined was the intensity of relationship. This linkage dimension had two indicators: (1) frequency of interaction and (2) relative resource commitment. The first indicator was found to be low in the department of occupational therapy but high in the department of physiotherapy. The second indicator of intensity was found to be low in the two departments.

The third linkage dimension that was considered was reciprocity of the relationship. This linkage dimension had two indicators: (1) resource reciprocity and (2) definitional reciprocity. The first indicator was found to be bilateral in the two departments and the second indicator of reciprocity revealed that there were mutual agreements and unilateral decisions on the exchanges of resources in the two departments. It was reported in the interviews that the Medical Training Centre was responsible for the selection of tutors and to some extent the selection of clinical instructors who supervised students during clinical practice.

The fourth linkage dimension that was studied was standardization of the relationship which was assessed by examining the procedural standardization of exchanges of resources between the Medical Training Centre and the Nyeri hospital. This linkage dimension was found to be low in the departments of physiotherapy and occupational therapy.

The second section of this chapter examined the analysis of data on effectiveness and ideal importance of broad goals of clinical practice. The mean ratings of effectiveness ranged from 2.10 to 2.98 on a five-point scale indicating the effectiveness of clinical practice in Nyeri hospital was perceived to be "good" and "fair" according to the scale used.

The findings on the ideal importance of broad goals revealed that six of the seven broad goals were perceived to be "important" and only one goal was perceived to be "very important" on a five-point scale.

## TABLE 8.4

## PROFILE OF LINKAGE DIMENSIONS FOUND IN NYERI GENERAL HOSPITAL

| LINKAGE DIMENSION | DEPARTMENT | |
|---|---|---|
| | OCCUPATIONAL THERAPY | PHYSIOTHERAPY |
| A. FORMALIZATION OF THE RELATIONSHIP | | |
| a. Formal Agreement Written ... Informal | Informal | Informal |
| b. Coordination (formal coordination ... informal) | Formal (clinical instructor) | Informal |
| B. INTENSITY OF RELATIONSHIP | | |
| a. Frequency of Interaction (High ... Low) | Low | High |
| b. Relative Resource Commitment (High ... Low) | Low | Low |
| C. RECIPROCITY OF RELATIONSHIP | | |
| a. Resource Reciprocity (Bilateral ... Unilateral exchange) | Bilateral exchange | Bilateral exchange |
| b. Definitional Reciprocity (Mutual agreement ... Unilateral decision) | Mutual agreement and Unilateral decision | Mutual agreement and unilateral decision |
| D. PROCEDURAL STANDARDIZATION (High ... Low) | Low | Low |

# CHAPTER 9

## DESCRIPTION AND DATA ANALYSIS OF THE NAKURU GENERAL HOSPITAL

The focus of this chapter is to provide a brief description of the departments of physiotherapy and occupational therapy, and to present the analysis of data on (1) linkage dimensions, (2) effectiveness, and (3) ideal importance of broad goals of clinical practice in the Nyeri provincial hospital.

The department of physiotherapy was opened in 1950 and approximately 18,000 patients are treated by seven physiotherapists annually. The department of occupational therapy was opened in 1974 and about 996 patients are treated by three occupational therapists yearly.

The analysis of data on linkage dimensions are presented following the order of sub-problems that were formulated in Chapter 1 under the headings of formalization, intensity, reciprocity and standardization. A summary of the linkage dimensions that were found in the Nakuru hospital in the departments of occupational therapy and physiotherapy is presented at the end of the chapter. Also the rating responses for the thirty one items that were used to determine the four linkage dimension in the two departments are shown in Table 9.1.

### PROBLEM 1: FORMALIZATION

#### Sub-Problem 1.1

Were there formal or informal agreements between the Medical

## TABLE 9.1

## SUMMARY OF RATING RESPONSES ON THIRTY ONE LINKAGE INDICATORS IN THE DEPARTMENTS OF OCCUPATIONAL THERAPY AND PHYSIOTHERAPY IN THE NAKURU PROVINCIAL HOSPITAL

| LINKAGE INDICATORS | DEPARTMENT | | | |
|---|---|---|---|---|
| | OCCUPATIONAL THERAPY | | PHYSIOTHERAPY | |
| A. FORMALIZATION | Formal | Informal | Formal | Informal |
| a) Formal Agreement (Written ... Informal) | | | | |
| Item | | | | |
| 1. | | X | | X |
| 2. | | X | | X |
| 3. | | X | | X |
| 4. | X | | X | |
| 5. | X | | X | |
| b) Coordination (Formal ... Informal) | Formal | Informal | Formal | Informal |
| 6. | X | | | X |
| B. FREQUENCY OF INTERACTION (Low ... High) | Low | High | Low | High |
| 7. | X | | X | |
| 8. | X | | X | |
| 9. | n/a | | n/a | |
| 10. | X | | X | |
| 11. | | X | | X |
| 12. | n/a | | n/a | |
| 13. | n/a | | n/a | |
| C. RELATIVE RESOURCE COMMITMENT (Low ... High) | Low | High | Low | High |
| 14. | | X | | X |
| 15. | X | | | X |
| 16. | n/a | | n/a | |
| 17. | X | | X | |
| 18. | X | | X | |
| D. RESOURCE RECIPROCITY (Unilateral ... Bilateral Exchange) | Unilateral | Bilateral | Unilateral | Bilateral |
| 19. | n/a | | n/a | |
| 20. | X | | n/a | |
| 21. | | X | | X |
| E. DEFINITIONAL RECIPROCITY (Mutual Agreement ... Unilateral Decision) | Mutual | Unilateral | Mutual | Unilateral |
| 22. | X | | X | |
| 23. | | X | n/a | |
| 24. | | X | n/a | |
| 25. | | X | n/a | |
| 26. | X | | X | |
| 27. | X | | X | |
| F. PROCEDURAL STANDARDIZATION (Low ... High) | Low | High | Low | High |
| 28. | n/a | | n/a | |
| 29. | X | | X | |
| 30. | X | | X | |
| 31. | n/a | | n/a | |

Each item was rated in accord with the rating scales shown in Part 3 of the questionnaire (Appendix A).

The interpretations of the rating responses for the thirty one items that determined the four linkage dimensions are also shown in Part 3 of the questionnaire (Appendix A).

Training Centre and the Nakuru provincial hospital in the departments of occupational therapy and physiotherapy?

### Sub-Problem 1.2

Was there formal or informal coordination of students' clinical practice between the Medical Training Centre and the Nakuru provincial hospital in the departments of physiotherapy and occupational therapy?

### Findings on the Formalization of the Relationship

The formalization of the relationship was determined by five items that assessed formal agreements and by one item that assessed formal coordination of students' clinical practice.

Items 1 and 2 indicated that there were informal agreements in the departments of physiotherapy and occupational therapy. Items 4 and 5 revealed that there were written communications between the senior tutors and the department heads in the two departments when students were in clinical practice. Item 6 revealed that there was a formal coordinator (clinical instructor) in the department of occupational therapy but in the department of physiotherapy there was informal coordination since the supervision of students during clinical practice was carried out by therapists who were delegated the responsibilities by the department head.

## PROBLEM 2: INTENSITY

### Sub-Problem 2.1

What was the frequency of interactions between the Medical Training Centre and the Nakuru hospital in the departments of occupational therapy and physiotherapy?

### Sub-Problem 2.2

What were the relative resource commitments between the Medical Training Centre and the Nakuru provincial hospital in the departments of occupational therapy and physiotherapy?

### Findings on Intensity of the Relationship

Marrett (1971) identified two indicators that may be used to assess the intensity of relationship between organizations. These are: (1) frequency of interaction and (2) relative resource commitment. These two indicators were used in this study. Seven items were used to determine the frequency of interaction and five items were used to determine relative resource commitment.

Items 7, 8 and 10 revealed a low frequency of interaction between the Medical Training Centre and the Nakuru hospital in the departments of physiotherapy and occupational therapy when students were in clinical practice. However, Item 11 indicated a high frequency of interaction in the two departmetns. Items 9, 12 and 13 were not applicable in the two departments. However, it was reported that the involvement of hospital staff in the development of goals of clinical practice in the two allied health professions would be beneficial to students during clinical practice. The department heads in the hospitals reported that they contributed "very little" in the general planning and supervision of students' clinical practice.

Items 14 - 18 assessed relative resource commitments between the Medical Training Centre and the Nakuru general hospital. Item 14 revealed that there was a high relative resource commitment since there was a specific budget for purchasing therapeutic equipment and materials in the two departments. Item 15 indicated a low resource commitment in the department of occupational therapy but a high relative resource commitment in the department of physiotherapy. In the two departments, more than three students were provided with facilities for clinical practice. Item 17 and 18 showed that there was a low resource commitment in the two departments because only two tutors were involved in students' clinical practice. Item 18 revealed that the hospital did not order any materials or therapeutic equipment or materials to be used specifically by students during clinical practice. This was an indication of low resource commitment.

## PROBLEM 3: RECIPROCITY

### Sub-Problem 3.1

Were there unilateral or bilateral exchanges of resources between the Medical Training Centre and the Nakuru provincial hospital in the departments of physiotherapy and occupational therapy?

### Sub-Problem 3.2

Were the conditions of resource exchanges between the Medical Training Centre and the Nakuru provincial hospital in the departments of occupational therapy and physiotherapy mutually agreed upon?

### Findings on the Reciprocity of the Relationship

Two indicators of reciprocity dimension were used in this study. These were: (1) resource reciprocity and (2) definitional reciprocity. Three items were used to determine resource reciprocity and six items were used to assess definitional reciprocity.

Item 19 indicated that there was no sharing of funds between the Medical Training Centre and the hospital when students were in clinical practice. It was reported that the Medical Training Centre provided all the funds to the students during clinical practice. Item 20 revealed that there were no exchanges of resources between the departments of physiotherapy. However, Item 20 showed that there were exchanges of therapeutic equipment and aids from the Medical Training Centre to the hospital. The equipment that were exchanged were made by students in the department of occupational therapy. Such equipment and therapeutic aids included toys, and aids used by patients in activities of daily living in recreation settings. Item 21 revealed that there was bilateral exchanges of information and ideas in the two departments when students were in clinical practice.

Items 22 - 27 were used to determine definitional reciprocity. Item 22 indicated that there were mutual agreements on the exchange of information in the departments of occupational therapy and physiotherapy. Items 23, 24 and 25 revealed that there were unilateral decisions on the exchange of clinical instructors, equipment and materials and tutors in the department of occupational therapy. However, items 23 and 24 were not applicable in the department of physiotherapy. Item 25 revealed that there was some agreement on the sharing of tutors in the two departments for consultation purposes when students were in clinical practice. Item 27 also showed that there was mutual agreement in sharing of physical facilities by tutors and students during clinical practice.

## PROBLEM 4: STANDARDIZATION

### Sub-Problem 4.1

To what extent were the rules, regulations and procedures for carrying out transactions between the Medical Training Centre and the Nakuru hospital in the departments of occupational therapy and physiotherapy clearly defined?

### Findings on Standardization of the Relationship

Marrett (1971:94) indicated two indicators of standardization of exchanges of resources between organizations. These were: (1) the fixedness of units of exchange and (2) the fixedness of procedures for exchange. In this study the second indicator (procedural standardization) was used. Four items were used to determine procedural standardization between the Nakuru hospital and the Medical Training Centre.

Items 28 and 31 indicates that there were no rules, regulations or procedures in the two departments that specified the conditions under which the resources would be exchanged or shared. Items 29 and 30 revealed that the job descriptions for third year students and the clinical instructors were generally understood in the department of occupational therapy. In the department of physiotherapy the procedures and the job descriptions for the department head were not clearly defined. The information from the interviews revealed a low procedural standardization in the two departments although there were written job descriptions for the third year students in the department of occupational therapy.

## EFFECTIVENESS AND IDEAL IMPORTANCE OF BROAD GOAL STATEMENTS OF CLINICAL PRACTICE

This section of the chapter will present the respondents' perceptions on the effectiveness and ideal importance of broad goals of clinical practice in the Nakuru general hospital.

The analysis of data will be based on sub-problems 5.1 and 6.1 that were formulated in Chapter 1. The data on sub-problem 5.1 deals with the effectiveness and the data on sub-problem 6.1 deals with the ideal importance of broad goals of clinical practice.

### EFFECTIVENESS

### Sub-Problem 5.1

What were the perceptions of both the occupational therapy and physiotherapy respondents' on the effectiveness of clinical practice in Nakuru general hospital?

### Findings on Effectiveness

Table 9.2 presents the data on the effectiveness of clinical practice in the Nakuru provincial general hospital. The number of respondents, the mean scores, the standard deviations and the rank orders are shown in Table 9.2. The mean scores were the basis for rank ordering.

The two highest and the two lowest mean scores of effectiveness are underlined. The results indicate that the mean ratings for

## Table 9.2

## RESPONDENTS' PERCEPTIONS OF EFFECTIVENESS OF CLINICAL PRACTICE IN NAKURU GENERAL HOSPITAL

| Broad Goal Statement | N | $\overline{X}$ | SD | Rank Order |
|---|---|---|---|---|
| Section A | | | | |
| 1. Providing the students with the opportunities of evaluating patients. | 10 | 2.91* | 0.69 | 7 |
| Section B | | | | |
| 2. Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | 10 | 2.65* | 0.54 | 4 |
| Section C | | | | |
| 3. Providing the students with the opportunities of broadening their medical knowledge and terminology. | 10 | 2.67 | 0.81 | 5 |
| Section D | | | | |
| 4. Providing the students with the opportunities of using themselves as therapeutic media. | 10 | 2.08* | 0.62 | 1 |
| Section E | | | | |
| 5. Providing the students with the opportunities of developing communication skills. | 10 | 2.56 | 0.91 | 3 |
| Section F | | | | |
| 6. Providing the students with the opportunities of developing professional attitudes. | 10 | 2.13* | 0.60 | 2 |
| Section G | | | | |
| 7. Providing the students with the opportunities of performing administrative functions. | 10 | 2.68 | 0.75 | 6 |

Interpretation of the Effectiveness Scale: 1-1.49 = very good; 1.50-2.49 = good; 2.50-3.49 = fair; 3.50-4.49 = poor; 4.50-5 = very poor.

*Underlined entries: ____ indicates the two lowest means and ---- indicates the two highest means for effectiveness.

effectiveness ranged from 2.08 to 2.91 indicating effectiveness was perceived to be "good" on two goals and "fair" on five effectiveness variables.

The goal statements that were ranked 1 and 2 were perceived to be better attained compared to the attainment of the other goals of clinical practice.

The two goals that had the "lowest" mean scores were: (1) ". . . providing the students with the opportunities of formulating aims of treatment and carrying out treatment" and (2) ". . . providing the students with the opportunities of developing professional attitudes."

The two goals that had the highest mean scores of effectiveness were: (1) ". . . providing the students with the opportunities of performing administrative functions" and (2) ". . . providing the students with the opportunities of developing communication skills".

## PROBLEM 6:

## IDEAL IMPORTANCE OF BROAD GOALS OF CLINICAL PRACTICE

### Sub-Problem 6.1

What were the perceptions of both the occupational therapy and physiotherapy respondents in Nakuru provincial general hospital on the ideal importance of broad goals?

### Findings on the Ideal Importance of Broad Goals

Table 9.3 presents the data on the ideal importance of broad goals of clinical practice at Nakuru general hospital. The number of

Table 9.3

RESPONDENTS' PERCEPTIONS OF IDEAL IMPORTANCE OF BROAD GOALS OF CLINICAL PRACTICE IN NAKURU GENERAL HOSPITAL

| Broad Goal Statement | N | $\overline{X}$ | SD | Rank Order |
|---|---|---|---|---|
| Section A | | | | |
| 1. Providing the students with the opportunities of evaluating patients. | 10 | 1.65 | 0.68 | 3 |
| Section B | | | | |
| 2. Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | 10 | 1.52* | 0.51 | 1 |
| Section C | | | | |
| 3. Providing the students with the opportunities of broadening their medical knowledge and terminology. | 10 | 1.67 | 0.46 | 4 |
| Section D | | | | |
| 4. Providing the students with the opportunities of using themselves as therapeutic media. | 10 | 1.76 | 0.56 | 5 |
| Section E | | | | |
| 5. Providing the students with the opportunities of developing communication skills. | 10 | 1.80* | 0.71 | 6 |
| Section F | | | | |
| 6. Providing the students with the opportunities of developing professional attitudes. | 10 | 1.60* | 0.58 | 2 |
| Section G | | | | |
| 7. Providing the students with the opportunities of performing administrative functions. | 10 | 1.93 | 0.52 | 7 |

Interpretation of the Ideal Importance Scale: 1-1.49 = very important; 1.50-2.49 = important; 2.50-3.49 = moderately important; 3.50-4.49 = of little importance; 4.50-5 = not important.

*Underlined entries: ____ indicates the two lowest means and ---- indicates the two highest means for ideal importance of goals.

respondents, the mean scores, the standard deviations and the rank orders are shown in Table 9.2. The mean scores were the basis for rank ordering.

The two "lowest" and the two "highest" mean scores of ideal importance of broad goals are underlined. The results indicate that the mean ratings of ideal importance of broad goals ranged from 1.52 to 1.93 indicating that all the seven goals were perceived to be "important".

The two goal statements that had the "lowest" mean scores were: (1) ". . . providing the students with the opportunities of formulating aims of treatment and carrying out treatment" and (2) ". . . providing the students with the opportunities of developing professional attitudes."

The two goals that had the "highest" mean scores on the ideal importance scale were: (1) ". . . providing the students with the opportunities of performing administrative functions" and (2) ". . . providing the students with the opportunities of developing communication skills."

## Further Analysis

An examination of the mean scores of effectiveness and ideal importance of broad goals revealed that the goal statement that was ranked 2 on the effectiveness scale was also ranked 2 on the ideal importance scale. The goal that were ranked 1 on the ideal importance scale was ranked 4 on the effectiveness scale. This was an indication that the goal that had the lowest mean of 1.52 on ideal importance scale was less attained compared to other broad goals of clinical practice.

## SUMMARY

This chapter has presented the analysis of data on (1) linkage dimensions, (2) effectiveness and (3) ideal importance of broad goal statements of clinical practice in Nakuru general hospital.

Table 9.4 presents a summary of linkage dimensions that were found in the Nyeri provincial hospital in the departments of physiotherapy and occupational therapy.

The first linkage dimension to be examined was formalization of the relationship. This linkage dimension was found to be informal on the first indicator in the two departments. However, coordination was found to be formal in the department of occupational therapy and informal in the department of physiotherapy when students were in clinical practice.

The second linkage dimension that was studied was the intensity of the relationship. A low intensity of relationship was found for the two indicators of intensity in the two departments.

The third linkage dimension that was examined was the reciprocity of relationship. The two indicators that were used were resource reciprocity and definitional reciprocity. The first indicator of reciprocity was found to be unilateral on the exchange of equipment and materials in the department of occupational therapy. However, in the department of physiotherapy this indicator was not applicable because there were no equipment and materials that were exchanged.

The final linkage dimension that was studied was the standardization of procedures for exchanges of resources between the Medical Training Centre and the Nakuru hospital in the two departments. This linkage dimension was found to be low in the two departments.

The second section of this chapter dealt with the effectiveness and the ideal importance of the broad goals of clinical practice.

The findings indicated that the mean scores of effectiveness ranged from 2.08 to 2.91 on a five-point scale indicating clinical practice in the Nakuru hospital was perceived to be "good" and "fair" according to the scale used.

The findings on the ideal importance of broad goals revealed that the seven goals were all perceived by the ten respondents to be "important". The mean ratings of ideal importance of broad goals on a give-point scale ranged from 1.52 to 1.93 indicating the goals were all perceived to be "important" on the scale used.

## TABLE 9.4

## PROFILE OF LINKAGE DIMENSIONS FOUND IN NAKURU GENERAL HOSPITAL

| LINKAGE DIMENSION | DEPARTMENT | |
|---|---|---|
| | OCCUPATIONAL THERAPY | PHYSIOTHERAPY |
| A. FORMALIZATION OF THE RELATIONSHIP | | |
| a. Formal Agreement Written ... Informal | Informal | Informal |
| b. Coordination (formal coordination ... informal) | Formal coordination | Informal coordination |
| B. INTENSITY OF RELATIONSHIP | | |
| a. Frequency of Interaction (High ... Low) | Low | Low |
| b. Relative Resource Commitment (High ... Low) | Low | Low |
| C. RECIPROCITY OF RELATIONSHIP | | |
| a. Resource Reciprocity (Bilateral ... Unilateral exchange) | Unilateral Exchange | Not applicable |
| b. Definitional Reciprocity (Mutual agreement ... Unilateral decision) | Mutual agreement and unilateral decision | Mutual agreement and unilateral decision |
| D. PROCEDURAL STANDARDIZATION (High ... Low) | Low | Low |

# CHAPTER 10

# DESCRIPTION AND ANALYSIS OF DATA OF THE KAKAMEGA PROVINCIAL HOSPITAL

This chapter presents a brief description of the departments of physiotherapy and occupational therapy, and the analysis of data on linkage dimensions, effectiveness and ideal importance of broad goals of clinical practice in the Kakamega provincial hospital.

The department of physiotherapy was established in 1970 and approximately 13,000 patients are treated annually by four physiotherapists. The department of occupational therapy was established in 1973 and about 730 patients are treated annually by two occupational therapists.

The analysis of data on linkage dimensions are presented following the order of the sub-problems that were formulated in Chapter 1 under the headings of formalization, intensity, reciprocity and standardization. A summary of the linkage dimensions that were found in the two departments in Kakamega general hospital is presented at the end of this chapter. Also, the rating responses for the thirty one items that were used to determine the four linkage dimensions in the two departments are presented in Table 10.1.

## PROBLEM 1: FORMALIZATION

### Sub-Problem 1.1

Were there formal or informal agreements between the Medical Training Centre and the Kakamega provincial hospital in the departments

## TABLE 10.1

## SUMMARY OF RATING RESPONSES ON THIRTY ONE LINKAGE INDICATORS IN THE DEPARTMENTS OF OCCUPATIONAL THERAPY AND PHYSIOTHERAPY IN THE KAKAMEGA PROVINCIAL HOSPITAL

| | DEPARTMENT | | | |
|---|---|---|---|---|
| | OCCUPATIONAL THERAPY | | PHYSIOTHERAPY | |
| LINKAGE INDICATORS | | | | |
| A. FORMALIZATION | Formal | Informal | Formal | Informal |
| a) Formal Agreement (Written ... Informal) | | | | |
| Item | | | | |
| 1. | | X | | X |
| 2. | | X | | X |
| 3. | | X | | X |
| 4. | | X | | X |
| 5. | | X | | X |
| b) Coordination (Formal ... Informal) | Formal | Informal | Formal | Informal |
| 6. | X | | | X |
| B. FREQUENCY OF INTERACTION (Low ... High) | Low | High | Low | High |
| 7. | X | | X | |
| 8. | X | | X | |
| 9. | n/a | | n/a | |
| 10. | X | | X | |
| 11. | | X | | X |
| 12. | n/a | | n/a | |
| 13. | n/a | | n/a | |
| C. RELATIVE RESOURCE COMMITMENT (Low ... High) | Low | High | Low | High |
| 14. | X | | X | |
| 15. | X | | | X |
| 16. | n/a | | n/a | |
| 17. | X | | X | |
| 18. | n/a | | n/a | |
| D. RESOURCE RECIPROCITY (Unilateral ... Bilateral Exchange) | Unilateral | Bilateral | Unilateral | Bilateral |
| 19. | n/a | | n/a | |
| 20. | n/a | | n/a | |
| 21. | | X | | X |
| E. DEFINITIONAL RECIPROCITY (Mutual Agreement ... Unilateral Decision) | Mutual | Unilateral | Mutual | Unilateral |
| 22. | X | | X | |
| 23. | X | | n/a | |
| 24. | n/a | | n/a | |
| 25. | X | | X | |
| 26. | n/a | | n/a | |
| 27. | X | | X | |
| F. PROCEDURAL STANDARDIZATION (Low ... High) | Low | High | Low | High |
| 28. | X | | X | |
| 29. | X | | X | |
| 30. | X | | n/a | |
| 31. | X | | X | |

Each item was rated in accord with the rating scales shown in Part 3 of the questionnaire (Appendix A).

The interpretations of the rating responses for the thirty one items that determined the four linkage dimensions are also shown in Part 3 of the questionnaire (Appendix A).

of physiotherapy and occupational therapy?

### Sub-Problem 1.2

Was there formal or informal coordination of students' clinical practice between the Medical Training Centre and the Kakamega general hospital in the departments of occupational therapy and physiotherapy?

### Findings on the Formalization of the Relationship

The existence of formalization of the relationship was measured by two indicators: (1) formal agreements and (2) formal coordination. In order to determine formal agreements five items were used and in order to assess formal coordination of students' clinical practice one item was used.

Item 1 revealed that there were informal agreements between the Medical Training Centre and the Kakamega provincial hospital in the departments of occupational therapy and physiotherapy. However, items 2, 3, 4 and 5 indicated that there were written communications between the tutors or department heads at the Medical Training Centre and the department heads or clinical instructors in the hospital when students were in clinical practice. The interview information revealed that there were no written communications between the hospital administrators and the administrators at the Medical Training Centre regarding students' clinical practice.

Item 6 revealed that there was formal coordination of students' clinical practice in the department of occupational therapy. However, in the department of physiotherapy it was reported that there was informal coordination of students' clinical practice. In the department occupational therapy there was a formal clinical instructor who supervised students during clinical practice. However, in the department of physiotherapy the responsibility of supervising students was carried out by several therapists who were willing to assist the department head. The information from the interview indicated that the appointment of a formal clinical instructor in the department of physiotherapy would benefit the students during their internship.

## PROBLEM 2: INTENSITY

### Sub-Problem 2.1

What was the frequency of interactions between the Medical Training Centre and the Kakamega general hospital in the departments of physiotherapy and occupational therapy?

### Sub-Problem 2.2

What were the relative resource commitments between the Medical Training Centre and the Kakamega provincial hospital in the departments of physiotherapy and occupational therapy?

### Findings on Intensity of the Relationship

Marrett (1971) identified two indicators of intensity of relationship between organizations. These indicators are: (1) frequency of interaction and (2) relative resource commitment. In this study these two indicators were used. Seven items were used to determine the frequency of interaction and five items were used to determine relative resource commitments between the Medical Training Centre and the Kakamega provincial hospital.

Items 7, 8 and 10 indicated a low frequency of interaction but Item 11 revealed a high frequency of interaction in the two departments. It was reported that the students communicated with tutors five or more times a year when in clinical practice. The students communicated about their progress in written or verbal communications. Items 9, 12 and 13 were not applicable in the two departments since it was not possible for students to attend classes while in clinical practice, and also, it was not possible for clinical instructors or department heads to be involved in the instruction of students at the Medical Training Centre. However, the information from the interviews indicated that the department heads and the clinical instructors organized some lectures and seminars for students during their clinical practice in the two professions.

Items 14 - 18 presents data on relative resource commitments between the Medical Training Centre and the Kakamega general hospital. Item 14 revealed that it was difficult to obtain money from the hospital that could be used specifically for purchasing therapeutic equipment and materials for use by students during clinical practice in the two departments. This was an indicator of low resource commitment from the hospital in the two departments. However, Item 15 indicated that there was a high resource commitment in the department of physiotherapy but a low resource commitment in the department of occupational therapy. Item 16 was not applicable in the two departments since there were no clinical instructors or department heads who taught at the Medical Training Centre. Item 17 revealed that there were two tutors who were involved in students' clinical practice in the two departments. This was an indication of a low resource commitment from the Medical Training Centre.

## PROBLEM 3: RECIPROCITY

### Sub-Problem 3.1

Were there unilateral or bilateral exchanges of resources between the Medical Training Centre and the Kakamega general hospital in the departments of occupational therapy and physiotherapy?

### Sub-Problem 3.2

Were the conditions of resource exchanges between the Medical Training Centre and the Kakamega general hospital in the departments of occupational therapy and physiotherapy mutually agreed upon?

### Findings on Reciprocity of the Relationship

Two indicators of reciprocity of the relationship were used in this study. These were: (1) resource reciprocity and (2) definitional reciprocity. In order to determine resource reciprocity three items were used and in order to determine definitional reciprocity six items were used.

Item 19 revealed that there were no exchanges or sharing of funds between the hospital and the Medical Training Centre in the two departments. Item 20 was not applicable in the two departments although it was reported that the department of occupational therapy at the hospital requested for some therapeutic aids that were made by students at the Medical Training Centre. However, Item 21 indicated that there was bilateral exchanges of information and ideas between the hospital and the Medical Training Centre when students were in clinical practice. Also, it was reported that the tutors and clinical instructors in the department of occupational therapy communicated about the progress of students during seminars that were organized for clinical instructors in all the hospitals.

Items 22 - 27 presents data on definitional reciprocity. Items 22, 23, 25 and 27 indicated that there were mutual agreements on the exchanges or sharing of information, clinical instructors, tutors and physical facilities in the department of occupational therapy. However, items 24 and 26 were not applicable in the departments of occupational therapy and physiotherapy since there were no exchanges or sharing of therapeutic equipment, and referral of patients to the Medical Training Centre for students' learning purposes. Items 22, 25 and 27 revealed that there were mutual agreements on the exchanges or sharing of information and ideas, tutors and physical facilities in the department of physiotherapy. Items 23, 24 and 26 were not applicable in the department of physiotherapy since there were no exchanges or sharing of equipment and materials, clinical instructors and referral of patients from the hospital to the Medical Training Centre for students' learning purposes.

## PROBLEM 4: STANDARDIZATION

### Sub-Problem 4.1

To what extent were the rules, regulations and procedures for carrying out transactions between the Medical Training Centre and the

Kakamega general hospital in the departments of occupational therapy and physiotherapy clearly defined?

### Findings on Standardization of the Relationship

In this study one indicator of standardization of the relationship between the Medical Training Centre and the Kakamega provincial hospital was used. The indicator was procedural standardization and four items were used to assess it.

Items 28, 29, 30 and 31 indicated a low procedural standardization in the department of occupational therapy and items 28, 29 and 31 also indicated a low procedural standardization in the department of physiotherapy. However, Item 30 was not applicable in the department of physiotherapy since there was no formal clinical instructor who supervised students during clinical practice. The responsibility of supervising students during their internship was undertaken by the department head.

## EFFECTIVENESS AND IDEAL IMPORTANCE OF BROAD GOAL STATEMENTS OF CLINICAL PRACTICE

This section of the chapter will present the analysis of data on the effectiveness and ideal importance of broad goals of clinical practice in Kakamega provincial general hospital.

The analysis of data will be based on sub-problems 5.1 and 6.1 that were formulated in Chapter 1. Sub-problem 5.1 deals with the effectiveness and sub-problem 6.1 deals with the ideal importance of broad goals of clinical practice.

## EFFECTIVENESS

### Sub-Problem 5.1

What were the perceptions of both the occupational and physiotherapy respondents' on the effectiveness of clinical practice in Kakamega provincial general hospital?

### Findings on Effectiveness

Table 10.2 presents data on the effectiveness of clinical practice in Kakamega general hospital. The number of respondents, the mean scores, the standard deviations and the rank orders are shown in Table 10.2. The mean scores were the basis for rank ordering.

The two "lowest" and the two "highest" mean scores of effectiveness are underlined. The results indicated that the mean ratings of effectiveness ranged from 2.40 to 3.14 indicating that the effectiveness of clinical practice in the Kakamega provincial hospital was perceived to be "good" on one effectiveness variable and "fair" on six effectiveness variables. The effectiveness of goal statements that were ranked 2, 3, 4, 5, 6 and 7 was perceived to be "fair" and the effectiveness of the goal that was ranked 1 was perceived to be "good" on the scale used.

The two goals that had the "lowest" mean scores were: (1) ". . . providing the students with the opportunities of using themselves as therapeutic media" and (2) ". . . providing the students with the opportunities of developing professional attitudes".

The two goals that had the "highest" mean scores and were perceived to be "fair" on effectiveness were: (1) ". . . providing

## Table 10.2

## RESPONDENTS' PERCEPTIONS OF EFFECTIVENESS OF CLINICAL PRACTICE IN KAKAMEGA GENERAL HOSPITAL

|  | Broad Goal Statement | N | $\bar{X}$ | SD | Rank Order |
|---|---|---|---|---|---|
|  | Section A |  |  |  |  |
| 1. | Providing the students with the opportunities of evaluating patients. | 10 | 3.14* | 0.80 | 7 |
|  | Section B |  |  |  |  |
| 2. | Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | 10 | 2.93 | 0.85 | 5 |
|  | Section C |  |  |  |  |
| 3. | Providing the students with the opportunities of broadening their medical knowledge and terminology. | 10 | 2.87 | 0.44 | 4 |
|  | Section D |  |  |  |  |
| 4. | Providing the students with the opportunities of using themselves as therapeutic media. | 10 | 2.40* | 0.91 | 1 |
|  | Section E |  |  |  |  |
| 5. | Providing the students with the opportunities of developing communication skills. | 10 | 2.73 | 1.21 | 3 |
|  | Section F |  |  |  |  |
| 6. | Providing the students with the opportunities of developing professional attitudes. | 10 | 2.55* | 0.89 | 2 |
|  | Section G |  |  |  |  |
| 7. | Providing the students with the opportunities of performing administrative functions. | 10 | 3.01* | 0.64 | 6 |

Interpretation of the Effectiveness Scale: 1-1.49 = very good; 1.50-2.49 = good; 2.50-3.49 = fair; 3.50-4.49 = poor; 4.50-5 = very poor.

*Underlined entries: ____ indicates the two lowest means and ---- indicates the two highest means for effectiveness.

the students with the opportunities of evaluating patients" and (2) ". . . providing the students with the opportunities of performing administrative functions.

## PROBLEM 6:

## IDEAL IMPORTANCE OF BROAD GOALS

### Sub-Problem 6.1

What were the perceptions of both the physiotherapy and occupational therapy departments in Kakamega provincial hospital on the ideal importance of broad goals?

### Findings on the Ideal Importance of Broad Goals

Table 10.3 presents data on the ideal importance of broad goals of clinical practice in Kakamega provincial general hospital. The number of respondents, the mean scores, the standard deviations and the rank orders are presented in Table 10.3. The mean scores were the basis for rank ordering.

The two "lowest" and the two "highest" mean scores of ideal importance of broad goals are underlined. The results indicate that the mean rating of ideal importance of goals ranged from 1.38 to 1.75 indicating that three of the seven broad goals were perceived to be "very important" and the remaining four were perceived to be "important".

The two goals that had the "lowest" mean scores were: (1) ". . . providing the students with the opportunities of using themselves as therapeutic media" and (2) ". . . providing the students with the opportunities of formulating aims of treatment and carrying

Table 10.3

## RESPONDENTS' PERCEPTIONS OF IDEAL IMPORTANCE OF BROAD GOALS OF CLINICAL PRACTICE IN KAKAMEGA GENERAL HOSPITAL

| Broad Goal Statement | N | $\overline{X}$ | SD | Rank Order |
|---|---|---|---|---|
| Section A | | | | |
| 1. Providing the students with the opportunities of evaluating patients. | 10 | 1.63* | 0.67 | 6 |
| Section B | | | | |
| 2. Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | 10 | 1.45* | 0.37 | 2 |
| Section C | | | | |
| 3. Providing the students with the opportunities of broadening their medical knowledge and terminology. | 10 | 1.49 | 0.26 | 3 |
| Section D | | | | |
| 4. Providing the students with the opportunities of using themselves as therapeutic media. | 10 | 1.38* | 0.29 | 1 |
| Section E | | | | |
| 5. Providing the students with the opportunities of developing communication skills. | 10 | 1.62 | 0.48 | 5 |
| Section F | | | | |
| 6. Providing the students with the opportunities of developing professional attitudes. | 10 | 1.53 | 0.58 | 4 |
| Section G | | | | |
| 7. Providing the students with the opportunities of performing administrative functions. | 10 | 1.75* | 0.30 | 7 |

Interpretation of the Ideal Importance Scale: 1-1.49 = very important; 1.50-2.49 = important; 2.50-3.49 = moderately important; 3.50-4.49 = of little importance; 4.50-5 = not important.

*Underlined entries: ____ indicates the two lowest means and ---- indicates the two highest means for ideal importance of goals.

out treatment".

The two goal statements that had the "highest" mean ratings on the ideal importance scale were: (1) ". . . providing the students with the opportunities of performing administrative functions", and (2) ". . . providing the students with the opportunities of evaluating patients".

### Further Analysis

An examination of the mean scores of effectiveness and ideal importance of broad goals of clinical practice indicated that the goal statement that was concerned with providing the students with the opportunities of using themselves as therapeutic media was ranked number one on both the effectiveness scale and the ideal importance scale. As indicated in Table 10.1 the goals that were ranked 2, 3, 4, 5, 6 and 7 were perceived to be "fair" on the effectiveness scale. The goal statement that was ranked 1 was perceived to be "good".

## SUMMARY

This chapter has presented the analysis of data on linkage dimensions, effectiveness and ideal importance of broad goals of clinical practice in Kakamega provincial general hospital.

Table 10.4 presents a summary of the linkage dimensions that were found in Kakamega provincial hospital in the departments of physiotherapy and occupational therapy.

The first linkage dimension that was studied was the formalization of the relationship. This linkage dimension had two indicators:

(1) formal agreements and (2) formal coordination. The first indicator of formalization was found to be informal in the two departments and the second indicator was found to be formal in the department of occupational therapy but informal in the department of physiotherapy.

The second linkage dimension that was examined was the intensity of the relationship. This linkage dimension had two indicators: (1) frequency of interaction and (2) relative resource commitments. The two indicators of intensity of relationship were found to be low in the two departments.

The third linkage dimension that was considered was the reciprocity of the relationship. Two indicators were examined in order to determine the reciprocity of the relationship. These two indicators were: (1) resource reciprocity and (2) definitional reciprocity. In both the departments of physiotherapy and occupational therapy, resource reciprocity was found to be bilateral since the Medical Training Centre and the hospital exchanged information and ideas when students were in clinical practice. The second indicator of reciprocity revealed that there were mutual agreements between the Medical Training Centre and the hospital in the two departments on the exchanges of resources.

The final linkage dimension that was studied was standardization of procedures for exchanging resources between the hospital and the Medical Training Centre in the two departments. This linkage dimension was found to be low in the two departments.

The second section of the chapter presented data on effectiveness and ideal importance of broad goals of clinical practice. The effectiveness was perceived to be "good" and "fair". The attainment of six goals was perceived to be "fair" and the attainment of one goal was perceived to be "good" according to the scale used.

The findings on the ideal importance of broad goals indicated that three of the seven goals were perceived to be "very important" and the remaining four were perceived to be "important". The mean ratings of ideal importance of the goals ranged from 1.38 to 1.75 on a five-point Likert-type scale.

TABLE 10.4

PROFILE OF LINKAGE DIMENSIONS FOUND IN KAKAMEGA GENERAL HOSPITAL

| LINKAGE DIMENSION | DEPARTMENT | |
|---|---|---|
| | OCCUPATIONAL THERAPY | PHYSIOTHERAPY |
| A. FORMALIZATION OF THE RELATIONSHIP | | |
| a. Formal Agreement Written ... Informal | Informal | Informal |
| b. Coordination (formal coordination ... informal) | Informal | Informal |
| B. INTENSITY OF RELATIONSHIP | | |
| a. Frequency of interaction (High ... Low) | Low | Low |
| b. Relative Resource Commitment (High ... Low) | Low | Low |
| C. RECIPROCITY OF RELATIONSHIP | | |
| a. Resource Reciprocity (Bilateral ... Unilateral exchange) | Bilateral exchange | Bilateral exchange |
| b. Definitional Reciprocity (Mutual agreement ... Unilateral decision) | Mutual agreement | Mutual agreement |
| D. PROCEDURAL STANDARDIZATION (High ... Low) | Low | Low |

# CHAPTER 11

## DESCRIPTION AND THE ANALYSIS OF THE DATA OF THE MACHAKOS GENERAL HOSPITAL

This chapter presents a brief description of the departments of physiotherapy and occupational therapy, the analysis of data on linkage dimensions, the effectiveness, and the ideal importance of broad goals of clinical practice in Machakos general provincial hospital.

The department of physiotherapy was opened in 1952 and approximately 15,000 patients are treated by four physiotherapists annually. The department of occupational therapy was established in 1976 and each year 803 patients are treated by three occupational therapists.

The analysis of data on linkage dimensions will be presented following the order of the sub-problems that were formulated in Chapter 1 under the headings of formalization, intensity, reciprocity and standardization. A summary of the linkage dimensions that were found in Machakos provincial hospitals in the departments of physiotherapy and occupational therapy is presented at the end of the chapter. Also, the rating responses for the thirty one items that were used to determine the four linkage dimensions in the two departments are shown in Table 11.1

### PROBLEM 1: FORMALIZATION

#### Sub-Problem 1.1

Were there formal or informal agreements between the Medical

## TABLE 11.1

## SUMMARY OF RATING RESPONSES ON THIRTY ONE LINKAGE INDICATORS IN THE DEPARTMENTS OF OCCUPATIONAL THERAPY AND PHYSIOTHERAPY IN THE MACHAKOS PROVINCIAL HOSPITAL

| | DEPARTMENT | | | |
|---|---|---|---|---|
| LINKAGE INDICATORS | OCCUPATIONAL THERAPY | | PHYSIOTHERAPY | |
| A. FORMALIZATION | Formal | Informal | Formal | Informal |
| a) Formal Agreement (Written ... Informal) | | | | |
| Item | | | | |
| 1. | | X | | X |
| 2. | | X | | X |
| 3. | | X | | X |
| 4. | n/a | | | n/a |
| 5. | n/a | | | n/a |
| b) Coordination (Formal ... Informal) | Formal | Informal | Formal | Informal |
| 6. | X | | | X |
| B. FREQUENCY OF INTERACTION (Low ... High) | Low | High | Low | High |
| 7. | X | | X | |
| 8. | | X | | X |
| 9. | n/a | | | n/a |
| 10. | X | | X | |
| 11. | | X | | X |
| 12. | n/a | | | n/a |
| 13. | n/a | | | n/a |
| C. RELATIVE RESOURCE COMMITMENT (Low ... High) | Low | High | Low | High |
| 14. | X | | X | |
| 15. | | X | | X |
| 16. | n/a | | n/a | |
| 17. | | X | | X |
| 18. | X | | | X |
| D. RESOURCE RECIPROCITY (Unilateral ... Bilateral Exchange) | Unilateral | Bilateral | Unilateral | Bilateral |
| 19. | n/a | | n/a | |
| 20. | X | | X | |
| 21. | | X | | X |
| E. DEFINITIONAL RECIPROCITY (Mutual Agreement ... Unilateral Decision) | Mutual | Unilateral | Mutual | Unilateral |
| 22. | X | | X | |
| 23. | X | | X | |
| 24. | n/a | | n/a | |
| 25. | X | | X | |
| 26. | n/a | | n/a | |
| 27. | X | | X | |
| F. PROCEDURAL STANDARDIZATION (Low ... High) | Low | High | Low | High |
| 28. | X | | X | |
| 29. | X | | X | |
| 30. | X | | n/a | |
| 31. | X | | X | |

Each item was rated in accord with the rating scales shown in Part 3 of the questionnaire (Appendix A).

The interpretations of the rating responses for the thirty one items that determined the four linkage dimensions are also shown in Part 3 of the questionnaire (Appendix A).

Training Centre and the Machakos provincial hospital in the departments of occupational therapy and physiotherapy?

### Sub-Problem 1.2

Was there formal or informal coordination of students' clinical practice between the Medical Training Centre and the Machakos provincial hospital in the departments of occupational therapy and physiotherapy?

### Findings on Formalization of the Relationship

The formalization of the relationship was determined by five items that assessed formal agreements and by one item that assessed formal coordination of students' clinical practice.

Items 1, 2 and 3 revealed that there were informal agreements between the Medical Training Centre and the hospital in the two departments when students were in clinical practice. Item 6 indicated that there was formal coordination of students' clinical practice in the department of occupational therapy but in the department of physiotherapy there was informal coordination. In the department of occupational therapy there was a formal coordinator (clinical instructor) who was responsible for the students during their internship. However, in the department of physiotherapy the responsibility of supervising students during clinical practice was undertaken by staff physiotherapists who were delegated the duties by the department head.

## PROBLEM 2: INTENSITY

### Sub-Problem 2.1

What was the frequency of interactions between the Medical Training Centre and the Machakos provincial general hospital in the departments of occupational therapy and physiotherapy?

### Sub-Problem 2.2

What were the relative resource commitments between the Medical Training Centre and the Machakos provincial general hospital in the departments of occupational therapy and physiotherapy?

### Findings on Intensity of the Relationship

Two indicators were used to determine the intensity of relationship in this study. These were: (1) frequency of interaction and (2) relative resource commitment. Items 7 - 13 were used to assess the frequency of interaction and items 14 - 18 were used to determine relative resource commitments.

Items 7 and 10 indicated a low frequency of interaction and items 8 and 11 revealed a high frequency of interaction in the departments of occupational therapy and physiotherapy. Item 9 was not applicable in the two departments because students did not attend classes while in clinical practice and Item 12 indicated that the clinical instructors were not involved in the instruction of students at the Medical Training Centre. Item 13 showed that the tutors did not receive any assistance from the clinical instructor or the department heads in developing the goals of clinical practice in the two departments.

Item 14 indicated that there was a specific budget for expenditure in the two departments that could be used when students were in clinical practice. It was reported that the money could be used for purchasing local materials. Item 15 indicated a high resource commitment from the Medical Training Centre. Three or four students were provided with facilities for clinical practice in the two departments and this was considered an indicator of high resource commitment. Item 16 was not applicable in the two departments because there were no therapists from the hospital who were involved in teaching at the Medical Training Centre. Item 17 revealed a high resource commitment because there were more than two tutors who were involved in students' clinical practice in the two departments. Item 18 indicated that the hospital did not order or purchase therapeutic equipment and materials specifically when students were in clinical practice. The information from the interviews indicated that the hospital purchased or ordered equipment and materials according to the needs of the two departments.

## PROBLEM 3: RECIPROCITY

### Sub-Problem 3.1

Were there unilateral or bilateral exchanges of resources between the Medical Training Centre and the Machakos general hospital in the departments of occupational therapy and physiotherapy?

### Sub-Problem 3.2

Were the conditions of resource exchanges between the Medical Training Centre and the Machakos general hospital in the departments of physiotherapy and occupational therapy mutually agreed upon?

## Findings on Reciprocity of the Relationship

Two indicators of reciprocity dimension were used in this study. These were: (1) resource reciprocity and (2) definitional reciprocity. Three items (19 - 21) were used to determine the resource reciprocity and six items (22 - 27) were used to determine definitional reciprocity.

Item 19 revealed that there was no exchange or sharing of funds between the hospital and the Medical Training Centre when students were in clinical practice.

Item 20 indicated a unilateral and bilateral exchange of resources between the Medical Training Centre and the Machakos provincial hospital in the departments of occupational therapy and physiotherapy. It was reported during the interview that the department of occupational therapy at the hospital requested for some therapeutic equipment and materials that were made by occupational therapy students at the Medical Training Centre. Item 21 indicated that there was bilateral exchanges of information and ideas in the two departments when students were in clinical practice. The exchange of information occured among the tutors, clinical instructors, students and department heads in the two professions.

Items 22, 23, 25 and 27 indicated that there were mutual agreements between the Medical Training Centre and the hospital in the two departments on the exchanges or sharing of information, clinical instructors, tutors and physical facilities when students were in clinical practice. Item 24 and 26 were not applicable in the two departments because there were no exchanges of therapeutic equipment and materials, and referral of patients from the hospital for students' learning purposes.

## PROBLEM 4: STANDARDIZATION

### Sub-Problem 4.1

To what extent were the rules, regulations and procedures for carrying out transactions between the Medical Training Centre and the Machakos general hospital in the departments of occupational therapy and physiotherapy clearly defined?

### Findings on Standardization of the Relationship

Marrett (1971) identified two indicators of standardization of exchanges of resources between organizations. These were: (1) the fixedness of units of exchange and (2) the fixedness of procedures for exchange of resources. In this study the second indicator of standardization was used. Four items (28 - 31) were used to assess the procedural standardization between the Medical Training Centre and the Machakos provincial hospital in the departments of physiotherapy and occupational therapy.

Items 28, 29 and 30 indicated a low procedural standardization in the department of occupational therapy and items 28 and 29 also indicated a low procedural standardization in the department of physiotherapy. However, Item 30 was not applicable in the department of physiotherapy because there were no clinical instructors. The supervision of students during clinical practice was carried out by the department head or by a qualified therapist who was delegated the responsibility by the department head.

Item 31 revealed that there were no written guidelines that specified the conditions under which resources could be shared or exchanged between the Medical Training Centre and the hospital in the two departments. This was an indication of low procedural standardization.

## EFFECTIVENESS AND IDEAL IMPORTANCE OF BROAD GOAL STATEMENTS OF CLINICAL PRACTICE

This section of Chapter 11 presents data on the effectiveness of clinical practice and the ideal importance of broad goals of clinical practice in Machakos general hospital in the two professions.

The analysis of data will be based on sub-problems 5.1 and 6.1 that were formulated in Chapter 1. The data on sub-problem 5.1 deals with the effectiveness and the data on sub-problem 6.1 deals with the ideal importance of broad goals of clinical practice.

## EFFECTIVENESS

### Sub-Problem 5.1

What were the perceptions of both the occupational therapy and physiotherapy respondents' on the effectiveness of clinical practice in Machakos provincial general hospital?

### Findings on Effectiveness

Table 11.2 presents the data on the effectiveness of clinical practice in Machakos provincial general hospital. The number of respondents, the mean scores, the standard deviations and the rank orders are shown in Table 11.2. The mean scores were the basis for rank ordering.

Table 11.2

RESPONDENTS' PERCEPTIONS OF EFFECTIVENESS OF CLINICAL PRACTICE IN MACHAKOS GENERAL HOSPITAL

| | Broad Goal Statement | N | $\overline{X}$ | SD | Rank Order |
|---|---|---|---|---|---|
| | Section A | | | | |
| 1. | Providing the students with the opportunities of evaluating patients. | 14 | 2.95* | 0.85 | 5.5[1] |
| | Section B | | | | |
| 2. | Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | 14 | 2.81 | 0.79 | 3 |
| | Section C | | | | |
| 3. | Providing the students with the opportunities of broadening their medical knowledge and terminology. | 14 | 2.95* | 0.85 | 5.5[1] |
| | Section D | | | | |
| 4. | Providing the students with the opportunities of using themselves as therapeutic media. | 14 | 2.45* | 0.81 | 1 |
| | Section E | | | | |
| 5. | Providing the students with the opportunities of developing communication skills. | 14 | 2.84 | 0.87 | 4 |
| | Section F | | | | |
| 6. | Providing the students with the opportunities of developing professional attitudes. | 14 | 2.68* | 0.89 | 2 |
| | Section G | | | | |
| 7. | Providing the students with the opportunities of performing administrative functions. | 14 | 3.16* | 0.67 | 7 |

Interpretation of the Effectiveness Scale: 1-1.49 = very good; 1.50-2.49 = good; 2.50-3.49 = fair; 3.50-4.49 = poor; 4.50-5 = very poor.

*Underlined entries: ____ indicates the two lowest means and ---- indicates the two highest means for effectiveness.

[1] Indicates tied ranks.

The two "highest" and the two "lowest" mean scores of effectiveness are underlined. The results indicate that the mean ratings of effectiveness ranged from 2.45 to 3.16 indicating that effectiveness of clinical practice in Machakos hospital was perceived to be "good" and "fair". The goals that were ranked 2, 3, 4, 5.5 and 7 in Table 11.1 were perceived to be "fair" and the goal statement that was ranked 1 in Table 11.1 was perceived to be "good". Since only one goal statement was perceived to be "good" the effectiveness of clinical practice in this hospital was considered to be "fair" according to the scale that was used.

The two goals that had the "lowest" mean ratings were: (1) ". . . providing the students with the opportunities of using themselves as therapeutic media" and (2) ". . . providing the students with the opportunities of developing professional attitudes".

The goal that had the "highest" mean score of effectiveness was concerned with ". . . providing the students with the opportunities of performing administrative functions."

## PROBLEM 6:

## IDEAL IMPORTANCE OF BROAD GOALS OF CLINICAL PRACTICE

### Sub-Problem 6.1

What were the perceptions of both the physiotherapy and occupational therapy respondents in Machakos provincial general hospital on the ideal importance of broad goals of clinical practice?

## Findings on Ideal Importance of Broad Goals

Table 11.3 presents the data on the ideal importance of broad goals of clinical practice in Machakos provincial general hospital. The number of respondents, the mean scores, the standard deviations and the rank orders are shown in Table 11.3. The mean scores were the basis for rank ordering.

The two "highest" and the two "lowest" mean ratings of ideal importance of broad goals are underlined in Table 11.3. The results indicate that the mean scores of ideal importance of broad goals ranged from 1.39 to 1.63 indicating that four of the seven goals of clinical practice were perceived to be "very important" and the remaining three were perceived to be important.

The two goal statements that had the "highest" mean scores on the ideal importance scale were: (1) ". . . providing the students with the opportunities of performing administrative functions" and (2) ". . . providing the students with the opportunities of formulating aims of treatment and carrying out treatment".

The two goals that had the "lowest" mean scores on the ideal importance scale were: (1) ". . . providing the students with the opportunities of evaluating patients" and (2) ". . . providing the students with the opportunities of developing professional attitudes."

## Further Analysis

An examination of the mean scores of effectiveness and ideal importance of broad goals in Tables 11.1 and 11.2 respectively indicated that the goals that were ranked 2, 4, 5.5 and 7 on the

## Table 11.3

## RESPONDENTS' PERCEPTIONS OF IDEAL IMPORTANCE OF BROAD GOALS OF CLINICAL PRACTICE IN MACHAKOS GENERAL HOSPITAL

| | Broad Goal Statement | N | $\overline{X}$ | SD | Rank Order |
|---|---|---|---|---|---|
| | Section A | | | | |
| 1. | Providing the students with the opportunities of evaluating patients. | 14 | 1.39* | 0.36 | 1 |
| | Section B | | | | |
| 2. | Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | 14 | 1.60* | 0.37 | 6 |
| | Section C | | | | |
| 3. | Providing the students with the opportunities of broadening their medical knowledge and terminology. | 14 | 1.49 | 0.31 | 5 |
| | Section D | | | | |
| 4. | Providing the students with the opportunities of using themselves as therapeutic media. | 14 | 1.43 | 0.41 | 3 |
| | Section E | | | | |
| 5. | Providing the students with the opportunities of developing communication skills. | 14 | 1.48 | 0.39 | 4 |
| | Section F | | | | |
| 6. | Providing the students with the opportunities of developing professional attitudes. | 14 | 1.42* | 0.29 | 2 |
| | Section G | | | | |
| 7. | Providing the students with the opportunities of performing administrative functions. | 14 | 1.63* | 0.44 | 7 |

Interpretation of the Ideal Importance Scale: 1-1.49 = very important; 1.50-2.49 = important; 2.50-3.49 = moderately important; 3.50-4.49 = of little importance; 4.50-5 = not important.

*Underlined entries: ____ indicates the two lowest means and ---- indicates the two highest means for ideal importance of goals.

effectiveness scale were also ranked 2, 4, 5 and 7 on the ideal importance scale. These findings indicate that the goals that were perceived to be "more important" (those with lowest mean scores) were better attained and vice versa.

## SUMMARY

This chapter has presented (1) a brief description of the departments of physiotherapy and occupational therapy, (2) the analysis of data on linkage dimensions, (3) the analysis of data on effectiveness and (4) the ideal importance of broad goals of clinical practice in Machakos provincial general hospital.

Table 11.4 presents a summary of the linkage dimensions that were found in the Machakos provincial general hospital in the departments of occupational therapy and physiotherapy.

The first linkage dimension that was sutdied was formalization of the relationship. This linkage dimension was found to be informal on the first indicator in the two departments. The second indicator of formalization was found to be formal in the department of occupational therapy but informal in the department of physiotherapy.

The second linkage dimension that was examined was the intensity of the relationship. The first indicator of intensity dimension was found to vary from low to high in the two departments. However, the second indicator of intensity was found to be low in the department of occupational therapy but high in the department of physiotherapy.

The third linkage dimension that was considered was the reciprocity of the relationship which had two indicators: (1) resource reciprocity and (2) definitional reciprocity. The first indicator of reciprocity was found to vary. For example, there were bilateral and unilateral exchanges of resources between the Medical Training Centre and the Machakos provincial hospital in the two departments that were examined. The second indicator of reciprocity revealed that there were mutual agreements on the exchanges of resources between the Medical Training Centre and the hospital in the two allied health professions.

The final linkage dimension that was studied was standardization of procedures for the exchanges of resources between the two organizations. This linkage dimension was found to be low in the two departments that were examined.

The second section of this chapter presented the analysis of data on effectivenss and ideal importance of broad goals of clinical practice in Machakos provincial hospital.

The findings revealed that the effectiveness of clinical practice was perceived to be "good" and "fair" according to the scale used. The findings on the ideal importance of broad goals of clinical practice indicated that four of the seven broad goals were perceived to be "very important" and the remaining three goals of clinical practice were perceived to be "important".

## TABLE 11.4

## PROFILE OF LINKAGE DIMENSIONS FOUND IN MACHAKOS GENERAL HOSPITAL

| LINKAGE DIMENSION | DEPARTMENT | |
|---|---|---|
| | OCCUPATIONAL THERAPY | PHSYIOTHERAPY |
| A. FORMALIZATION OF THE RELATIONSHIP | | |
| a. Formal agreement Written ... Informal | Informal | Informal |
| b. Coordination (formal coordination ... informal) | Formal coordination | Informal coordination |
| B. INTENSITY OF RELATIONSHIP | | |
| a. Frequency of interaction (High ... Low) | High ... Low | High ... Low |
| b. Relative Resource Commitment (High ... Low) | Low | High |
| C. RECIPROCITY OF RELATIONSHIP | | |
| a. Resource Reciprocity (Bilateral ... Unilateral exchange) | Bilateral ... Unilateral | Bilateral ... Unilateral |
| b. Definitional Reciprocity (Mutual agreement ... Unilateral exchange) | Mutual agreement | Mutual agreement |
| D. PROCEDURAL STANDARDIZATION (High ... Low) | Low | Low |

# CHAPTER 12

## DESCRIPTION AND ANALYSIS OF DATA OF THE COAST GENERAL HOSPITAL

This chapter presents a brief description of the departments of occupational therapy and physiotherapy, the analysis of data on linkage dimensions, the effectiveness and the ideal importance of broad goals of clinical practice in the Coast general hospital.

The department of physiotherapy was established in 1947 and every year about 17,000 patients are treated by seven physiotherapists. The department of occupational therapy was established in 1974 and about 693 patients are treated by two occupational therapists annually.

The analysis of data on linkage dimensions will be presented following the order of the sub-problems that were formulated in Chapter 1 under the headings of formalization, intensity, reciprocity and standardization. A summary of the linkage dimensions that were found in the Coast general hospital is presented at the end of the chapter. The rating responses for the thirty one items that were used to determine the four linkage dimensions in the two departments is also presented in Table 12.1.

### LINKAGE DIMENSIONS

### PROBLEM 1: FORMALIZATION

#### Sub-Problem 1.1

Were there formal or informal agreements between the Medical Training Centre and the Coast general hospital in the departments

## TABLE 12.1

## SUMMARY OF RATING RESPONSES ON THIRTY ONE LINKAGE INDICATORS IN THE DEPARTMENTS OF OCCUPATIONAL THERAPY AND PHYSIOTHERAPY IN THE COAST PROVINCIAL HOSPITAL

| | DEPARTMENT | | | |
|---|---|---|---|---|
| | OCCUPATIONAL THERAPY | | PHYSIOTHERAPY | |
| LINKAGE INDICATORS | | | | |
| A. FORMALIZATION | Formal | Informal | Formal | Informal |
| a) Formal Agreement (Written ... Informal) | | | | |
| Item | | | | |
| 1. | | X | | X |
| 2. | | X | | X |
| 3. | | X | | X |
| 4. | X | | X | |
| 5. | X | | X | |
| b) Coordination (Formal ... Informal) | Formal | Informal | Formal | Informal |
| 6. | X | | | X |
| B. FREQUENCY OF INTERACTION (Low ... High) | Low | High | Low | High |
| 7. | X | | X | |
| 8. | X | | X | |
| 9. | n/a | | n/a | |
| 10. | | X | | X |
| 11. | | X | | X |
| 12. | n/a | | n/a | |
| 13. | n/a | | n/a | |
| C. RELATIVE RESOURCE COMMITMENT (Low ... High) | Low | High | Low | High |
| 14. | X | | X | |
| 15. | X | | | X |
| 16. | n/a | | n/a | |
| 17. | X | | X | |
| 18. | X | | X | |
| D. RESOURCE RECIPROCITY (Unilateral ... Bilateral Exchange) | Unilateral | Bilateral | Unilateral | Bilateral |
| 19. | n/a | | n/a | |
| 20. | X | | n/a | |
| 21. | | X | | X |
| E. DEFINITIONAL RECIPROCITY (Mutual Agreement ... Unilateral Decision) | Mutual | Unilateral | Mutual | Unilateral |
| 22. | X | | X | |
| 23. | X | | n/a | |
| 24. | X | | X | |
| 25. | X | | | X |
| 26. | n/a | | n/a | |
| 27. | X | | X | |
| F. PROCEDURAL STANDARDIZATION (Low ... High) | Low | High | Low | High |
| 28. | n/a | | n/a | |
| 29. | X | | n/a | |
| 30. | X | | n/a | |
| 31. | X | | X | |

Each item was rated in accord with the rating scales shown in Part 3 of the questionnaire (Appendix A).

The interpretations of the rating responses for the thirty one items that determined the four linkage dimensions are also shown in Part 3 of the questionnaire (Appendix A).

of physiotherapy and occupational therapy?

## Sub-Problem 1.2

Was there formal or informal coordination of students' clinical practice between the Medical Training Centre and the Coast general hospital in the departments of occupational therapy and physiotherapy?

## Findings on Formalization of the Relationship

The formalization of the relationship was determined by five items that assessed formal agreements and by one item that assessed formal coordination.

Items 1, 2 and 3 indicated that there were informal agreements in the departments of occupational therapy and physiotherapy. Items 4 and 5 revealed that there were written communications between the tutors at the Medical Training Centre and the department heads at the Coast general hospital on matters related to students' clinical practice. However, the information from the interviews indicated that the relationship between the Medical Training Centre and the hospital was considered to be informal in the two departments.

Item 6 indicated that there was formal coordination of students' clinical practice in the department of occupational therapy but informal in the department of physiotherapy. In the department of occupational therapy there was a formal coordinator (clinical instructor) who supervised students during their internship. In the department of physiotherapy the responsibility of supervising students during clinical practice was carried out by the department head or by therapists who were delegated the responsibility by the department head.

## PROBLEM 2: INTENSITY

### Sub-Problem 2.1

What was the frequency of interactions between the Medical Training Centre and the Coast general hospital in the departments of occupational therapy and physiotherapy?

### Sub-Problem 2.2

What were the relative resource commitments between the Medical Training Centre and the Coast general hospital in the departments of occupational therapy and physiotherapy?

### Findings on Intensity of the Relationship

Two indicators of intensity of the relationship were used in this study. These were: (1) frequency of interaction and (2) relative resource commitment. Items 7 - 13 were used to determine the frequency of interaction and items 14 - 18 were used to assess relative resource commitment.

Items 7 and 8 indicated a low frequency of interaction but items 10 and 11 revealed a high frequency of interaction in the two departments. However, the information from the interviews showed that the interactions between the Medical Training Centre and the Coast general hospital in the two departments were considered to be low. The students were visited by tutors from the Medical Training Centre once or twice during their internship. Items 9, 12 and 13 were not applicable in the two departments for the following reasons: (1) students did not attend classes at the Medical Training Centre during clinical practice, (2) clinical instructors were not involved in the instruction of students at the Medical Training Centre, and (3) tutors did not receive any assistance from the clinical instructors or department heads in developing courses or the goals of clinical practice.

Item 14 revealed that there was a specific budget for expenditure in the two departments when students are in clinical practice. However, the information from the interviews showed that the budget was limited because the money allocated for the purchase of therapeutic equipment and other treatment aids was not enough. Item 15 indicated a low resource commitment in the department of occupational therapy but a high resource commitment in the department of physiotherapy. The department of occupational therapy provided only one student with clinical practice whereby the department of physiotherapy provided three students with clinical practice. Item 16 was not applicable in the two departments because there were no clinical instructors or department heads from the hospital who taught at the Medical Training Centre. Item 17 and 18 indicated a low relative resource commitment in the two departments. There were two tutors who were involved in students' clinical practice and the hospital ordered therapeutic equipment once or twice while students were in clinical practice. Since Item 14 indicated a limited amount of money for the purchase of therapeutic equipment in the two departments, Item 18 was considered to indicate a low resource commitment in the two departments.

## PROBLEM 3: RECIPROCITY

### Sub-Problem 3.1

Were there unilateral or bilateral exchanges of resources between the Medical Training Centre and the Coast general hospital in the departments of physiotherapy and occupational therapy?

### Sub-Problem 3.2

Were the conditions of resource exchanges between the Medical Training Centre and the Coast general hospital in the departments of occupational therapy and physiotherapy mutually agreed upon?

### Findings on Reciprocity of the Relationship

In this study two indicators of reciprocity dimension were used. These were: (1) resource reciprocity and (2) definitional reciprocity. Three items (19 - 21) were used to assess resource reciprocity and six itmes (22 - 27) were used to determine definitional reciprocity.

Item 19 revealed that there was no sharing of funds between the Medical Training Centre and the Coast general hospital in the two departments. Item 20 was not applicable in the department of physiotherapy but in the department of occupational therapy this item indicated that there was unilateral exchange of therapeutic equipment and materials.

It was reported that the department of occupational therapy requested some equipment and therapeutic aids that were made by students from the Medical Training Centre. Item 21 revealed that there was bilateral exchange of information and ideas in the two departments when students were in clinical practice.

Items 22, 23, 25 and 27 indicated that there were mutual agreements on the exchanges or sharing of (1) tutors, (2) information, (3) clinical instructors, (4) therapeutic equipment and materials and (5) physical facilities between the Medical Training Centre and the Coast general hospital in the department of occupational therapy. However, items 23, 25 and 26 were not applicable in the department of physiotherapy, and also Item 26 was not applicable in the department of occupational therapy.

## PROBLEM 4: STANDARDIZATION

### Sub-Problem 4.1

To what extent were the rules, regulations and procedures for carrying out transactions between the Medical Training Centre and the Coast general hospital in the departments of occupational therapy and physiotherapy clearly defined?

### Findings on Standardization of the Relationship

Marrett (1971) identified two indicators of standardization of exchanges of resources between organizations. These were: (1) the fixedness of units of exchange and (2) the fixedness of procedures for exchanges of resources. In this study the second indicator of standardization was used. Four items (28 - 31) were used to determine procedural standardization between the two organizations that are considered.

Item 28 indicated that there were no written procedures, rules and regulations in the two departments that delineated the interrelationships between the Medical Training Centre and the Coast general hospital when students were in clinical practice. Items 29 and 30 revealed a low procedural standardization. For example, the job descriptions for third year students and clinical instructors in the department of occupational therapy were reported to be poorly written. Also, Item 29 indicated that the job descriptions for the third year phyisotherapy students were poorly written. Item 30 was not applicable in the department of physiotherapy. However, the information from the interview in the department of physiotherapy showed that job descriptions for department heads were not clear and explicit. Item 31 revealed that there were no written guidelines in the two departments that specified the conditions under which resources were exchanged or shared between the Medical Training Centre and the Coast general hospital. The department heads felt that the establishment of such guidelines would be useful to the two organizations.

## EFFECTIVENESS AND IDEAL IMPORTANCE OF BROAD GOALS OF CLINICAL PRACTICE

This section of Chapter 12 presents data on the effectiveness and ideal importance of broad goals of clinical practice in the Coast general hospital.

The analysis of data will be based on sub-problems 5.1 and 6.1 that were formulated in Chapter 1. The data on sub-problem 5.1 deals with the effectiveness of clinical practice and the data on sub-problem 6.1 deals with the ideal importance of broad goals of clinical practice as perceived by both the occupational therapy and physiotherapy respondents in the Coast general hospital.

## EFFECTIVENESS

### Sub-Problem 5.1

What were the perceptions of both the occupational therapy and physiotherapy respondents' on the effectiveness of clinical practice in the Coast general hospital?

### Findings on Effectiveness

Table 12.2 presents the data on the effectiveness of clinical practice in the Coast general hospital. The number of respondents, the mean scores, the standard deviations and the rank orders are shown in Table 12.2. The mean scores were the basis of rank ordering.

The two "lowest" and the two "highest" mean scores of effectiveness are underlined. The results indicate that the mean scores of effectiveness ranged from 2.74 to 3.61 indicating that effectiveness was perceived to be "fair" and "poor" in the Coast general hospital.

The goals that were ranked 1, 2, 3, 4, 5 and 6 were perceived to be "fair" on the effectiveness scale and the goal statement that was ranked 7 was the only one that was perceived to be "poor" on the effectiveness scale according to the scale that was used. Since only one goal statement was perceived to be "poor" on the effectiveness scale it was concluded that the effectiveness of clinical practice in the Coast general hospital was "fair" according to the scale that was used.

The two goals that had the "lowest" mean scores on the effectiveness were: (1) ". . . providing the students with the opportunities of

## Table 12.2

## RESPONDENTS' PERCEPTIONS OF EFFECTIVENESS OF CLINICAL PRACTICE IN THE COAST GENERAL HOSPITAL

| Broad Goal Statement | N | $\overline{X}$ | SD | Rank Order |
|---|---|---|---|---|
| Section A | | | | |
| 1. Providing the students with the opportunities of evaluating patients. | 9 | 3.22 | 0.74 | 4 |
| Section B | | | | |
| 2. Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | 9 | 3.18 | 0.51 | 3 |
| Section C | | | | |
| 3. Providing the students with the opportunities of broadening their medical knowledge and terminology. | 9 | 3.61* | 0.42 | 7 |
| Section D | | | | |
| 4. Providing the students with the opportunities of using themselves as therapeutic media. | 9 | 3.24 | 0.93 | 5 |
| Section E | | | | |
| 5. Providing the students with the opportunities of developing communication skills. | 9 | 3.07* | 0.63 | 2 |
| Section F | | | | |
| 6. Providing the students with the opportunities of developing professional attitudes. | 9 | 2.74* | 0.58 | 3 |
| Section G | | | | |
| 7. Providing the students with the opportunities of performing administrative functions. | 9 | 3.49* | 0.51 | 6 |

Interpretation of the Effectiveness Scale: 1-1.49 = very good; 1.50-2.49 = good; 2.50-3.49 = fair; 3.50-4.49 = poor; 4.50-5 = very poor.

*Underlined entries: ____ indicates the two lowest means and ---- indicates the two highest means for effectiveness.

developing professional attitudes" and (2) ". . . providing the students with the opportunities of developing communication skills".

The two goals that had the "highest" mean scores on the effectiveness scale were: (1) ". . . providing the students with the opportunities broadening their medical knowledge and terminology" and (2) ". . . providing the students with the opportunities of performing administrative functions."

## PROBLEM 6:

## IDEAL IMPORTANCE OF BROAD GOALS OF CLINICAL PRACTICE

### Sub-Problem 6.1

What were the perceptions of both the occupational therapy and the physiotherapy respondents in the Coast general hospital on the ideal importance of broad goals of clinical practice?

### Findings on Ideal Importance of Broad Goals

Table 12.3 presents the data on the ideal importance of broad goals of clinical practice in the Coast general hospital. The number of respondents, the mean scores, the standard deviations and the rank orders are shown. The mean scores were the basis of rank ordering.

The two "highest" and the two "lowest" mean scores of ideal importance of broad goals are underlined in Table 12.3. The results indicate that the mean ratings of ideal importance of broad goals ranged from 1.39 to .189 indicating that two of the seven goals of clinical practice were perceived to be "very important" and the remaining five were perceived to be "important".

## Table 12.3

## RESPONDENTS' PERCEPTIONS OF IDEAL IMPORTANCE OF BROAD GOALS OF CLINICAL PRACTICE IN THE COAST GENERAL HOSPITAL

| Broad Goal Statement | N | $\overline{X}$ | SD | Rank Order |
|---|---|---|---|---|
| Section A | | | | |
| 1. Providing the students with the opportunities of evaluating patients. | 9 | 1.60 | 0.66 | 5 |
| Section B | | | | |
| 2. Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | 9 | 1.76* | 0.49 | 6 |
| Section C | | | | |
| 3. Providing the students with the opportunities of broadening their medical knowledge and terminology. | 9 | 1.50* | 0.35 | 3 |
| Section D | | | | |
| 4. Providing the students with the opportunities of using themselves as therapeutic media. | 9 | 1.44 | 0.40 | 2 |
| Section E | | | | |
| 5. Providing the students with the opportunities of developing communication skills. | 9 | 1.53* | 0.42 | 4 |
| Section F | | | | |
| 6. Providing the students with the opportunities of developing professional attitudes. | 9 | 1.39 | 0.36 | 1 |
| Section G | | | | |
| 7. Providing the students with the opportunities of performing administrative functions. | 9 | 1.89* | 0.44 | 7 |

Interpretation of the Ideal Importance Scale: 1-1.49 = very important; 1.50-2.49 = important; 2.50-3.49 = moderately important; 3.50-4.49 = of little importance; 4.50-5 = not important.

*Underlined entries: ____ indicates the two lowest means and ---- indicates the two highest means for ideal importance of goals.

The two goals that had the "lowest" mean scores on the ideal importance of broad goals were: (1) ". . . providing the students with the opportunities of developing professional attitudes" and (2) ". . . providing the students with the opportunities of using themselves as therapeutic media."

The two goals that had the "highest" mean scores on the ideal importance of broad goals were: (1) ". . . providing the students with the opportunities of performing administrative functions" and (2) ". . . providing the students with the opportunities of formulating aims of treatment and carrying out treatment."

### Further Analysis

An examination of the mean scores of effectiveness in Table 12.2 and the mean scores of ideal importance of broad goals in Table 12.3 indicate that the goal that was ranked 1 on effectiveness was also ranked 1 on the ideal importance scale. However, in general the rankings of effectiveness and ideal importance of broad goals in the Coast general hospital appeared to vary a great deal. For example, the goal statements that had the "lowest" mean scores on the ideal importance scale did not have the "lowest" mean scores on the effectiveness scale.

## SUMMARY

This chapter has presented (1) a brief description of the departments of physiotherapy and occupational therapy, (2) the analysis of data on linkage dimensions, (3) the analysis of data on effectiveness and ideal importance of broad goals of clinical practice in the Coast general hospital.

Table 12.4 presents a summary of the linkage dimensions that were found in the Coast general hospital in the departments of physiotherapy and occupational therapy.

The first linkage dimension that was examined was the formalization of the relationship. This linkage dimension was found to be informal on the first indicator (formal agreements) in the two departments. However, the second indicator of formalization was found to be formal in the department of occupational therapy but informal in the department of physiotherapy.

The second linkage dimension that was studied was the intensity of the relationship. Both the frequency of interaction and relative resource commitment were found to be low in the two departments in the Coast general hospital.

The third linkage dimension that was studied was the reciprocity of the relationship which had two indicators: (1) resource reciprocity and (2) definitional reciprocity. The first indicator revealed both unilateral and bilateral exchanges of resources in the department of occupational therapy. However, in the department of physiotherapy resource reciprocity was found to be bilateral. For example, it was reported that only information was shared between the Medical Training Centre and the hospital. The second indicator of reciprocity revealed that there were mutual agreements between the hospital and the Medical Training Centre in the two departments on the exchanges of resources that were involved.

The last linkage dimension that was studied was the standardization of procedures for exchanging resources. This linkage dimension was found to be low in the two departments that were examined in this study.

The second section of this chapter examined the analysis of data on effectiveness and ideal importance of broad goals of clinical practice.

The findings on effectiveness revealed that the clinical practice in the Coast general hospital was perceived to be "fair" and the findings on the ideal importance of broad goals revealed that the broad goals were perceived to be "very important" and "important" according to the scales. The mean scores of the broad goals ranged from 1.39 to 1.89 on a five-point Likert-type scale indicating two goals were perceived to be "very important" and the remaining five goals were perceived to be "important".

TABLE 12.4

PROFILE OF LINKAGE DIMENSIONS FOUND IN THE COAST GENERAL HOSPITAL

| LINKAGE DIMENSION | DEPARTMENT | |
|---|---|---|
| | OCCUPATIONAL THERAPY | PHYSIOTHERAPY |
| A. FORMALIZATION OF THE RELATIONSHIP | | |
| a. Formal Agreement Written ... Informal | Informal | Informal |
| b. Coordination (formal agreement ... informal) | Formal coordination | Informal coordination |
| B. INTENSITY OF RELATIONSHIP | | |
| a. Frequency of interaction (High ... Low) | Low | Low |
| b. Relative Resource Commitment (High ... Low) | Low | Low |
| C. RECIPROCITY OF RELATIONSHIP | | |
| a. Resource Reciprocity (Bilateral ... Unilateral exchange) | Unilateral exchange<br>Bilateral exchange | Bilateral exchange |
| b. Definitional Reciprocity (Mutual agreement agreement ... Unilateral decision) | Mutual agreement | Mutual agreement |
| D. PROCEDURAL STANDARDIZATION (High ... Low) | Low | Low |

# CHAPTER 13

# COMPARATIVE ANALYSIS OF THE HOSPITALS STUDIED

This chapter has four purposes: (1) to present comparative analysis of linkage dimensions that were found between the Medical Training Centre and the provincial general hospitals; (2) to present statistical analyses of three sub-problems (5.2; 5.3 and 5.4) pertaining to the overall effectiveness of clinical practice and two sub-problems (6.2 and 6.3) pertaining to the ideal importance of broad goals; (3) to compare the effectiveness of clinical practice in the provincial general hospitals; and (4) to examine possible relationships between the linkage dimensions and the effectiveness of clinical practice.

## LINKAGE DIMENSIONS

Chapters 5 through 12 presented the findings on the linkage dimension existing in each provincial hospital. To assist in comparing the linkage profiles Table 13.1 summarizes these findings for each of the hospitals.

### Findings

The nature of the linkage dimensions which existed for each hospital is detailed under the headings of formalization, intensity, reciprocity and standardization. This information is presented separately for the departments of occupational therapy and physiotherapy.

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Table 13.1

COMPARISON OF LINKAGE DIMENSIONS PROFILES FOUND IN
EIGHT PROVINCIAL GENERAL HOSPITALS

| HOSPITAL | DEPARTMENTS | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OCCUPATIONAL THERAPY LINKAGE DIMENSIONS PROFILES | | | | | | | | | | | | | | PHYSIOTHERAPY LINKAGE DIMENSIONS PROFILES | | | | | | | | | | | | | |
| | A. FORMALIZATION | | | | B. INTENSITY | | | | C. RECIPROCITY | | | | D. STANDARDIZATION | | A. FORMALIZATION | | | | B. INTENSITY | | | | C. RECIPROCITY | | | | D. STANDARDIZATION | |
| | a) Formal Agreement | | b) Formal Co-ordination | | a) Frequency of interaction | | b) Relative Resource Commitment | | a) Resource Reciprocity | | b) Definitional Reciprocity | | a) Procedural Standardization | | a) Formal Agreement | | b) Formal Co-ordination | | a) Frequency of interaction | | b) Relative Resource Commitment | | a) Resource Reciprocity | | b) Definitional Reciprocity | | a) Procedural Standardization | |
| | i) Informal | ii) Formal | i) Informal | ii) Formal | i) High | ii) Low | i) Low | ii) High | i) Bilateral exchange | ii) Unilateral exchange | i) Mutual agreement | ii) Unilateral decision | i) Low | ii) High | i) Informal | ii) Formal | i) Informal | ii) Formal | i) High | ii) Low | i) Low | ii) High | i) Bilateral exchange | ii) Unilateral exchange | i) Mutual agreement | ii) Unilateral decision | i) Low | ii) High |
| KENYATTA NATIONAL HOSPITAL | x | | | x | x | | | x | x | | x | | x | | x | | x | | x | | | x | x | | x | | x | |
| MATHARI HOSPITAL | x | | | x | x | | x | x[2] | x | x* | | x | x | | NOT APPLICABLE | | | | | | | | | | | | | |
| NYANZA GENERAL HOSPITAL | x | | | x | x | | x | | x | x* | x | | x | | x | | x | | | x | x | | x | x* | x | | x | |
| NYERI GENERAL HOSPITAL | x | | | x | | x | x | | x | | x | | x | | x | | x | | x | | x | | x | | x | | x | |
| NAKURU GENERAL HOSPITAL | x | | | x | | x | x | | x | x* | x | | x | | x | | x | | x | x[1] | x | | N/A | | x | x[3] | x | |
| KAKAMEGA GENERAL HOSPITAL | x | | | x | | x | x | | x | | x | | x | | x | | x | | | x | x | | x | | x | | x | |
| MACHAKOS GENERAL HOSPITAL | x | | | x | x | x[1] | x | | x | x* | x | | x | | x | | x | | x | x[1] | | x | x | x* | x | | x | |
| COAST GENERAL HOSPITAL | x | | | x | | x | x | x[2] | x | x* | x | | x | | x | | x | | | x | x | | x | | x | | x | |
| No. of Departments: | 8/0 | | 0/8 | | 4/5 | | 7/3 | | 8/5 | | 7/1 | | 8/0 | | 7/0 | | 7/0 | | 4/5 | | 5/2 | | 6/2 | | 7/1 | | 7/0 | |

[1] Indicates both high and low frequency of interaction among the participants in the two organizations.

[2] Indicates both low and high resource commitment from the two organizations.

[3] Indicates both mutual agreements and unilateral decisions between the two organizations.

*Indicates Bilateral and Unilateral exchange of resources

Formalization. As evident in Table 13.1 the study examined two indicators of formalization. These were: (1) formal agreements and (2) formal coordination. For the first of these, the table reveals that there were informal agreements between the Medical Training Centre and each of the provincial general hospitals in both the departments of occupational therapy and physiotherapy. With respect to formal coordination the table reveals that there was formal coordination of students' clinical practice between the Medical Training Centre and all the provincial hospitals in the department of occupational therapy but that there was informal coordination of students' clinical practice in all physiotherapy departments.

Intensity. The research variable "intensity" has two indicators: (1) frequency of interaction and (2) relative resource commitment. The frequency of interactions between the Medical Training Centre and the provincial hospitals in both the departments of physiotherapy and occupational therapy was found to vary depending on the type of communication that occurred between the two organizations. For example, the frequency of interactions between the Medical Training Centre and five provincial hospitals in both the departments of physiotherapy and occupational therapy was found to be low and the frequency of interactions between the Medical Training Centre and four provincial hospitals in both the departments of occupational therapy and physiotherapy was found to be high. The relative resource commitments between the Medical Training Centre and seven departments of occupational therapy and five departments of physiotherapy was found to be low. However, the relative resource commitments between the Medical Training Centre and three departments of occupational therapy and two departments of physiotherapy was found to be high depending on what type of resource was involved.

Reciprocity. Two indicators of reciprocity dimension were utilized: (1) resource reciprocity and (2) definitional reciprocity. The first indicator revealed that there were bilateral exchanges of resources (e.g. information and ideas) between the Medical Training Centre and eight departments of occupational therapy and six departments of physiotherapy. It was also reported that there were unilateral exchanges of resources between the Medical Training Centre and five departments of occupational therapy and two departments of physiotherapy. The resources that were unilaterally exchanged were therapeutic aids and equipment that were made by the students at the Medical Training Centre in the two professions. The second indicator of reciprocity showed that there were mutual agreements between the Medical Training Centre and seven provincial hospitals in the departments of physiotherapy and occupational therapy.

Between the Medical Training Centre and the provincial hospitals in the departments of physiotherapy, it was reported that there were mutual agreements on the exchanges of resources in all cases but one. In the one case, it was reported that the sharing of tutors between Medical Training Centre and the Nakuru provincial hospital was not mutually agreed upon. The hospital staff felt that the decision was made unilaterally at the Medical Training Centre.

Standardization. The last linkage dimension that was examined was standardization which had one indicator. In all the provincial hospitals in both the departments of physiotherapy and occupational therapy standardization was found to be low.

## Discussion of the Findings

The findings of this study on linkage dimensions provide support for Marrett's (1971:95) contention that the characteristics of her second interorganizational model are unlikely to exist due to the kinds of investments and commitments that organizations would have to make. The second model of interorganizational relationships according to Marrett (1971) may be characterized by a high degree of formalization, intensity and standardization. The findings of this study did not support this model but her first model of interorganizational relationships because according to Marrett (1971:95) the first model is characterized by a low degree of formalization, intensity and standardization. The findings of this study revealed a low degree of formalization and procedural standardization in the eight provincial hospitals that were studied. The degree of intensity appeared to vary. For example, the frequency of interaction was found to be high in three hospitals and low in four hospitals with one exception that revealed both high and low in the departments of occupational therapy. Four hospitals were found to have a high frequency of interactions and five hospitals were found to have a low frequency of interactions in the departments of physiotherapy.

The degree of relative resource commitment was found to be low in seven departments of occupational therapy and in five departments of physiotherapy. The five Kenyatta National hospital was found to have a high degree of intensity with the Medical Training Centre in both the departments of physiotherapy and occupational therapy. This may have occurred because the two organizations are close to each other. Also, the informal interactions and exchanges of resources between these two organizations may have accounted for the high degree of intensity of the relationship.

In this study the findings on the reciprocity dimension appeared to vary. The findings on variation of resource reciprocity support the findings of Levine and White (1963) who asserted that "the direction in which exchanges of resources occur may vary". Also, as Marrett (1971:95) pointed out, resource reciprocity may be low or high. The second indicator of reciprocity showed that the interactions between the Medical Training Centre and seven provincial hospitals were mutually agreed upon in the departments of occupational therapy and physiotherapy. Thus, from this discussion the only linkage dimension that appeared to support Marrett's (1971) second model of interorganizational relationships was the intensity of relationships. However, as Marrett (1971) noted, this linkage dimension varies to a great extent among autonomous organizations. The Medical Training Centre and the eight provincial hospitals are autonomous organizations under the Ministry of Health. Each of these organizations have a provincial medical officer who is directly responsible to the Permanent Secretary in the Ministry of Health.

## EFFECTIVENESS AND IDEAL IMPORTANCE OF BROAD GOALS

This section of Chapter 13 presents the statistical analyses associated with three sub-problems (5.2; 5.3 and 5.4) pertaining to the overall effectiveness and two sub-problems (6.2 and 6.3) pertaining to ideal importance of broad goals of clinical practice. The analysis of data follows the order of the sub-problems as presented in Chapter 1.

# PROBLEM 5: EFFECTIVENESS

## Sub-Problem 5.2

What were the perceptions of the four sub-groups of respondents, namely physiotherapists, occupational therapists, physiotherapy students and occupational therapy students on the overall effectiveness of clinical practice?

## Sub-Problem 5.3

Were there differences among the four sub-groups of respondents in their perceptions of the overall effectiveness of clinical practice?

## Findings on Sub-Problems 5.2 and 5.3

One way analysis of variance was used to compare the mean scores of the four sub-groups of respondents on their perceptions of the overall effectiveness of clinical practice. Following the analysis of variance where the F ratio was statistically significant at the 0.05 level the Scheffé Multiple Comparison of Means was used to determine which pairs of groups means were significantly different. Table 13.2 presents data on comparison of mean scores of the four sub-groups of respondents on their perceptions of overall effectiveness of clinical practice.

The lowest and the highest mean scores of effectiveness for each variable are underlined in Table 13.2. The degree of attainment of the goals stated in Section A, B, C and E was perceived on the average to be "fair" by the physiotherapy students and occupational therapy students, and by the occupational therapists and the physiotherapists.

TABLE 13.2

COMPARISON OF MEAN SCORES OF THE FOUR SUB-GROUPS OF RESPONDENTS ON THE OVERALL EFFECTIVENESS OF CLINICAL PRACTICE

| BROAD GOAL STATEMENT | Sub-group | Number of Respondents | $\bar{X}$ | SD | F ratio | Probability | Groups Significantly Different[a] 1 2 3 4 |
|---|---|---|---|---|---|---|---|
| SECTION A | | | | | | | |
| 1. Providing the students with the opportunities of evaluating patients. | 1. P.T. students | 34 | 3.29 | 0.11 | 4.69 | 0.04* | 1 - 4<br>2 - 4 |
| | 2. O.T. students | 23 | 3.47 | 0.18 | | | |
| | 3. Staff P.T.s | 53 | 3.09 | 0.11 | | | |
| | 4. Staff O.T.s | 48 | 2.83 | 0.11 | | | |
| SECTION B | | | | | | | |
| 2. Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | 1. P.T. students | 34 | 3.11 | 0.53 | 8.53 | 0.00** | 1 - 4<br>2 - 4<br>2 - 3 |
| | 2. O.T. students | 23 | 2.57 | 0.78 | | | |
| | 3. Staff P.T.s | 53 | 2.93 | 0.72 | | | |
| | 4. Staff O.T.s | 48 | 2.68 | 0.77 | | | |
| SECTION C | | | | | | | |
| 3. Providing the students with the opportunities of broadening their medical terminology and knowledge. | 1. P.T. students | 34 | 3.04 | 0.63 | 5.65 | 0.00** | 2 - 4 |
| | 2. O.T. students | 23 | 3.45 | 0.96 | | | |
| | 3. Staff P.T.s | 53 | 3.05 | 0.76 | | | |
| | 4. Staff O.T.s | 48 | 2.65 | 0.85 | | | |
| SECTION D | | | | | | | |
| 4. Providing the students with the opportunities of using themselves as therapeutic media. | 1. P.T. students | 34 | 2.52 | 0.73 | 2.81 | 0.04* | 2 - 4 |
| | 2. O.T. students | 23 | 2.82 | 0.79 | | | |
| | 3. Staff P.T.s | 53 | 2.53 | 0.76 | | | |
| | 4. Staff O.T.s | 48 | 2.26 | 0.85 | | | |
| SECTION E | | | | | | | |
| 5. Providing the students with the opportunities of developing communication skills. | 1. P.T. students | 34 | 3.00 | 0.67 | 3.71 | 0.01* | 2 - 4 |
| | 2. O.T. students | 23 | 3.21 | 0.95 | | | |
| | 3. Staff P.T.s | 53 | 2.82 | 0.89 | | | |
| | 4. Staff O.T.s | 48 | 2.58 | 0.73 | | | |
| SECTION F | | | | | | | |
| 6. Providing the students with the opportunities of developing professional attitudes. | 1. P.T. students | 34 | 3.03 | 0.66 | 16.29 | 0.00** | 1 - 4<br>1 - 3<br>2 - 3 |
| | 2. O.T. students | 23 | 3.21 | 0.70 | | | |
| | 3. Staff P.T.s | 53 | 2.85 | 0.65 | | | |
| | 4. Staff O.T.s | 48 | 2.22 | 0.74 | | | |
| SECTION G | | | | | | | |
| 7. Providing the students with the opportunities of performing administrative functions. | 1. P.T. students | 34 | 3.63 | 0.62 | 12.96 | 0.00** | 3 - 4<br>1 - 4<br>2 - 4 |
| | 2. O.T. students | 23 | 3.74 | 0.84 | | | |
| | 3. Staff P.T.s | 53 | 3.18 | 0.70 | | | |
| | 4. Staff O.T.s | 48 | 2.74 | | | | |

Interpretation of the Effectiveness Scale: 1-1.49 = very good; 1.50-2.49 = good; 2.50-3.49 = fair; 3.50-4.49 = poor; 4.50-5 = very poor.

*Significantly different at 0.05 level

**Significantly different at 0.01 level

[a] Scheffe Multiple Comparison of Means set at 0.1 level

The degree of attainment of the goals stated in Section D and F were perceived to be "fair" by physiotherapy students and occupational therapy students, and by physiotherapists. However, the degree of attainment of these two goals was perceived by the occupational therapists to be "good" according to the scale used.

The attainment of the goal included in Section F was perceived to be "fair" by physiotherapists and occupational therapists whereas the physiotherapy students and occupational therapy students perceived the attainment of this goal to be "poor".

## PROBLEM 5: EFFECTIVENESS

### Sub-Problem 5.4

Were there differences between the occupational therapy and physiotherapy respondents in their perceptions of the overall effectiveness of clinical practice?

### Findings on Sub-Problem 5.4

Table 13.3 presents the results of the "*t*"-test that was used to test for possible significant differences between the mean scores of physiotherapy and occupational therapy respondents in relation to their perceptions of the overall effectiveness of clinical practice. The findings revealed that the physiotherapy respondents had the highest mean scores for all the effectiveness variables indicating that they perceived the clinical practice to be less effective according to the scale used.

However, the results of the "*t*"-test indicated that the mean scores of physiotherapy and occupational therapy respondents were significantly

## Table 13.3

## COMPARISON OF MEAN SCORES OF EFFECTIVENESS OF CLINICAL PRACTICE AS PERCEIVED BY OCCUPATIONAL THERAPY AND PHYSIOTHERAPY RESPONDENTS

| BROAD GOAL STATEMENT | Respondent | Number of Respondents | $\bar{X}$ | SD | t Value | Probability |
|---|---|---|---|---|---|---|
| SECTION A | | | | | | |
| 1. Providing the students with the opportunities of evaluating patients. | P.T. | 87 | 3.17 | 0.73 | 1.09 | 0.28 |
| | O.T. | 71 | 3.03 | 0.83 | | |
| SECTION B | | | | | | |
| 2. Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | P.T. | 87 | 3.00 | 0.65 | 0.20 | 0.84 |
| | O.T. | | | | | |
| SECTION C | | | | | | |
| 3. Providing the students with the opportunities of broadening their medical terminology and knowledge. | P.T. | 87 | 3.05 | 0.71 | 1.00 | 0.32 |
| | O.T. | 71 | 2.91 | 0.96 | | |
| SECTION D | | | | | | |
| 4. Providing the students with the opportunities of using themselves as therapeutic media. | P.T. | 86 | 2.52 | 0.75 | 0.67 | 0.51 |
| | O.T. | 71 | 2.44 | 0.87 | | |
| SECTION E | | | | | | |
| 5. Providing the students with the opportunities of developing communication skills. | P.T. | 87 | 2.89 | 0.81 | 0.81 | 0.42 |
| | O.T. | 71 | 2.78 | 0.86 | | |
| SECTION F | | | | | | |
| 6. Providing the students with the opportunities of developing professional attitudes. | P.T. | 87 | 2.92 | 0.67 | 2.86 | 0.01** |
| | O.T. | 71 | 2.54 | 0.93 | | |
| SECTION G | | | | | | |
| 7. Providing the students with the opportunities of performing administrative functions. | P.T. | 87 | 3.36 | 0.89 | 2.33 | 0.02* |
| | O.T. | 71 | 3.67 | 0.86 | | |

Interpretation of the Effectiveness Scale: 1-1.49 = very good; 1.50-2.49 = good; 2.50-3.49 = fair; 3.50-4.49 = poor; 4.50-5 = very poor.

*Significantly different at 0.05 level

**Significantly different at 0.01 level

O.T. refers to occupational therapy

P.T. refers to physiotherapy

different only for the goals stated in sections F and G. The difference between the two mean scores in Section F was significant at the 0.05 level and the difference between the two mean scores in Section G was significant at the 0.01 level. The results of the "t"-test revealed that there were no significant differences between the mean scores of physiotherapy and occupational therapy respondents for the effectiveness variables in Sections A, B, C, D, and E of Table 13.3. However, there were significant differences between the mean scores of physiotherapy and occupational therapy respondents on effectiveness variables in Sections F and G at the 0.01 and 0.05 level respectively.

## PROBLEM 6:

## IDEAL IMPORTANCE OF BROAD GOALS OF CLINICAL PRACTICE

### Sub-Problem 6.2

Were there differences between the occupational therapy and physiotherapy respondents in their perceptions of ideal importance of broad goals of clinical practice?

### Findings of Sub-Problem 6.2

The t-test was used to test significant differences between the mean scores of physiotherapy and occupational therapy respondents both students and qualified therapists on the ideal importance of broad goals of clinical practice. Table 13.4 presents a comparison of mean scores of ideal importance of broad goals between the physiotherapy and occupational therapy respondents. The results of the t-test showed that there was a significant difference at the 0.05 level between the mean scores of physiotherapy and occupational therapy respondents on the goal

Table 13.4

COMPARISON OF MEAN SCORES OF IDEAL IMPORTANCE OF BROAD GOAL STATEMENTS
AS PERCEIVED BY OCCUPATIONAL THERAPY AND PHYSIOTHERAPY RESPONDENTS

| BROAD GOAL STATEMENTS | Groups | Number of Respondents | $\bar{X}$ | SD | $t$ Value | Probability |
|---|---|---|---|---|---|---|
| SECTION A | | | | | | |
| 1. Providing the students with the opportunities of evaluating patients. | P.T. | 87 | 1.51 | 0.44 | -0.80 | 0.42 |
| | O.T. | 71 | 1.57 | 0.44 | | |
| SECTION B | | | | | | |
| 2. Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | P.T. | 87 | 1.59 | 0.43 | 0.18 | 0.85 |
| | O.T. | 71 | 1.58 | 0.39 | | |
| SECTION C | | | | | | |
| 3. Providing the students with the opportunities of broadening their medical knowledge and terminology. | P.T. | 87 | 1.57 | 0.34 | -0.84 | 0.40 |
| | O.T. | 71 | 1.62 | 0.40 | | |
| SECTION D | | | | | | |
| 4. Providing the students with the opportunities of using themselves as therapeutic media. | P.T. | 87 | 1.55 | 0.43 | 0.35 | 0.73 |
| | O.T. | 71 | 1.52 | 0.45 | | |
| SECTION E | | | | | | |
| 5. Providing the students with the opportunities of developing communication skills. | P.T. | 87 | 1.62 | 0.44 | -0.48 | 0.64 |
| | O.T. | 71 | 1.66 | 0.41 | | |
| SECTION F | | | | | | |
| 6. Providing the students with the opportunities of developing professional attitudes. | P.T. | 87 | 1.54 | 0.44 | 0.60 | 0.55 |
| | O.T. | 71 | 1.50 | 0.43 | | |
| SECTION G | | | | | | |
| 7. Providing the students with the opportunities of performing administrative functions. | P.T. | 87 | 1.90 | 0.50 | 2.09 | 0.04* |
| | O.T. | 71 | 1.74 | 0.42 | | |

Interpretation of the Ideal Importance Scale: 1-1.49 = very important; 1.50-2.49 = important; 2.50-3.49 = moderately important; 3.50-4.49 = of little importance; 4.50-5 = not important.

*Significant at 0.05 level

O.T. = Occupational Therapy

P.T. = Physiotherapy

that was concerned with providing students with the opportunities of performing administrative functions. There were no significant differences between the physiotherapy and occupational therapy respondents in their perceptions about the ideal importance of broad goals shown in Sections A, B, C, D, E and F in Table 13.4.

### Sub-Problem 6.3

Were there differences among the four sub-groups of respondents in their perceptions of the ideal importance of broad goals of clinical practice?

### Findings of Sub-Problem 6.3

Table 13.5 presents the results of a one way analysis of variance that was used to test for significant differences among the four sub-groups of respondents on the ideal importance of broad goals of clinical practice. The Scheffé Multiple Comparison of Means was used to identify the sub-group mean scores which were significantly different from each other. The lowest and the highest mean scores and the groups that are significantly different from each other are shown in Table 13.5.

The analysis of variance using the F ratio showed that there were no significant differences in the mean scores for goals stated in Sections A, D and F. However, there were significant differences among the mean scores for goals that are stated in Sections B, C and E.

## EFFECTIVENESS OF CLINICAL PRACTICES

In this section of the chapter a comparative analysis of effectiveness of clinical practice in eight provincial general hospitals is

TABLE 13.5

COMPARISON OF MEAN SCORES OF IDEAL IMPORTANCE OF BROAD GOAL STATEMENTS
AS PERCEIVED BY THE FOUR SUB-GROUPS OF RESPONDENTS

| BROAD GOAL STATEMENT | Sub-Group of Respondent | Number of Respondents | $\bar{X}$ | SD | F Ratio | Probability | Groups Significantly Different 1 2 3 4 |
|---|---|---|---|---|---|---|---|
| SECTION A | | | | | | | |
| 1. Providing the students with the opportunities of evaluating patients. | 1. P.T. students | 34 | 1.44 | 0.42 | 1.03 | 0.38 | |
| | 2. O.T. students | 23 | 1.64 | 0.31 | | | |
| | 3. Staff P.T. | 53 | 1.56 | 0.44 | | | |
| | 4. Staff O.T. | 48 | 1.53 | 0.47 | | | |
| SECTION B | | | | | | | |
| 2. Providing the students with the opportunities of formulating aims of treatment and carrying out treatment. | 1. P.T. students | 34 | 1.68 | 0.59 | 4.40 | 0.01** | 2 - 4<br>2 - 3 |
| | 2. O.T. students | 23 | 1.80 | 0.31 | | | |
| | 3. Staff P.T. | 53 | 1.54 | 0.30 | | | |
| | 4. Staff O.T. | 47 | 1.47 | 0.39 | | | |
| SECTION C | | | | | | | |
| 3. Providing the students with the opportunities of broadening their medical knowledge and terminology. | 1. P.T. students | 34 | 1.73 | 0.37 | 6.34 | 0.00** | 1 - 3<br>2 - 3<br>2 - 4 |
| | 2. O.T. students | 23 | 1.77 | 0.33 | | | |
| | 3. Staff P.T. | 53 | 1.47 | 0.27 | | | |
| | 4. Staff O.T. | 48 | 1.55 | 0.41 | | | |
| SECTION D | | | | | | | |
| 4. Providing the students with the opportunities of using themselves as therapeutic media. | 1. P.T. students | 34 | 1.62 | 0.40 | 2.00 | 0.12 | |
| | 2. O.T. students | 23 | 1.68 | 0.51 | | | |
| | 3. Staff P.T. | 52 | 1.50 | 0.41 | | | |
| | 4. Staff O.T. | 48 | 1.85 | 0.42 | | | |
| SECTION E | | | | | | | |
| 5. Providing the students with the opportunities of developing communication skills. | 1. P.T. students | 34 | 2.05 | 0.61 | 5.10 | 0.00** | 1 - 4 |
| | 2. O.T. students | 23 | 1.92 | 0.42 | | | |
| | 3. Staff P.T. | 53 | 1.81 | 0.39 | | | |
| | 4. Staff O.T. | 48 | 1.66 | 0.40 | | | |
| SECTION F | | | | | | | |
| 6. Providing the students with the opportunities of developing professional attitudes. | 1. P.T. students | 34 | 1.58 | 0.46 | 1.86 | 0.14 | |
| | 2. O.T. students | 23 | 1.65 | 0.51 | | | |
| | 3. Staff P.T. | 53 | 1.51 | 0.42 | | | |
| | 4. Staff O.T. | 48 | 1.42 | 0.37 | | | |
| SECTION G | | | | | | | |
| 7. Providing the students with the opportunities of performing administrative functions. | 1. P.T. students | 34 | 1.69 | 0.47 | 2.21 | 0.89 | |
| | 2. O.T. students | 23 | 1.83 | 0.39 | | | |
| | 3. Staff P.T. | 53 | 1.58 | 0.42 | | | |
| | 4. Staff O.T. | 48 | 1.57 | 0.48 | | | |

Interpretation of the Ideal Importance Scale: 1-1.49 = very important; 1.50-2.49 = important; 2.50-3.49 = moderately important; 3.50-4.49 = of little importance; 4.50-5 = not important.

**Significant at 0.01 level

*Underlined entries: ____ indicates the lowest mean scores and ‾‾‾‾ indicates the highest mean scores of the ideal importance of Broad Goal Statements of clinical practice.

presented. The effectiveness of clinical practice was based on the perceived attainment of seven broad goals of clinical practice in each hospital.

In order to determine the effectiveness of clinical practice in each hospital the occupational therapy and physiotherapy respondents rated effectiveness of clinical practice in their respective hospitals on a five-point Likert type scale. The F ratio was used to compare the mean scores for each of the seven effectiveness variables. The results are presented in Table 13.6.

The findings revealed that the effectiveness of clinical practice in each provincial hospital was perceived to be "good" and "fair". The degree of attainment of six goals of clinical practice in the Kenyatta National hospital, the Kakamega provincial hospital and the Machakos provincial hospital was perceived to be "fair" and the degree of attainment of one goal in each of these hospitals was perceived to be "good". However, the degree of attainment of five goals of clinical practice in the Coast provincial hospital and the Mathari hospital was perceived to be "fair" and the attainment of two goals of clinical practice in these two hospitals was perceived to be "poor". In the Nakuru and Nyanza provincial general hospitals the degree of attainment of five goals of clinical practice was perceived to be "fair" and the degree of attainment of two goals of clinical practice in these two hospitals was perceived to be "good". In the Nyeri provincial hospital, the attainment of three goals of clinical practice was perceived to be "good" and the attainment of "four" goals of clinical practice was perceived to be "fair".

An examination of the mean scores of effectiveness revealed that

### Table 13.6

### COMPARISON OF MEAN SCORES OF EFFECTIVENESS IN EIGHT PROVINCIAL GENERAL HOSPITALS

| EFFECTIVENESS VARIABLE[1] | HOSPITALS | | | | | | | | | | | | | | | | | | | | | | | | RESULTS OF ANOVA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Kenyatta National Hospital | | | Mathari Hospital | | | Nyeri Hospital | | | Nakuru Hospital | | | Nyanza Hospital | | | Kakamega Hospital | | | Machakos Hospital | | | Coast Hospital | | | |
| | N | $\bar{X}$ | Rank | N | $\bar{X}$ | Rank | N | $\bar{X}$ | Rank | N | $\bar{X}$ | Rank | N | X | Rank | N | $\bar{X}$ | Rank | N | $\bar{X}$ | Rank | N | $\bar{X}$ | Rank | |
| 1. | 72 | 3.09 | 6 | 20 | 3.50 | 6.5 | 10 | 2.82 | 4 | 10 | 2.91 | 7 | 13 | 3.06 | 6 | 10 | 3.15 | 7 | 14 | 2.95 | 5.5 | 9 | 3.22 | 4 | NS* |
| 2. | 71 | 2.95 | 5 | 20 | 3.35 | 4 | 10 | 2.87 | 6 | 10 | 2.65 | 6 | 13 | 3.09 | 7 | 10 | 2.93 | 5 | 14 | 2.82 | 3 | 9 | 3.187 | 3 | NS* |
| 3. | 72 | 2.89 | 3 | 20 | 3.41 | 5 | 10 | 2.98 | 7 | 10 | 2.68 | 4.5 | 13 | 2.86 | 5 | 10 | 2.86 | 4 | 14 | 2.95 | 5.5 | 9 | 3.61 | 7 | NS* |
| 4. | 72 | 2.49 | 1 | 20 | 2.72 | 1 | 10 | 2.10 | 1 | 10 | 2.08 | 1 | 12 | 2.22 | 1 | 10 | 2.40 | 1 | 14 | 2.46 | 1 | 9 | 3.24 | 5 | NS* |
| 5. | 72 | 2.84 | 2 | 20 | 3.27 | 3 | 10 | 2.35 | 3 | 10 | 2.52 | 3 | 13 | 2.76 | 3 | 10 | 2.73 | 3 | 14 | 2.84 | 4 | 9 | 3.07 | 2 | NS* |
| 6. | 72 | 3.37 | 7 | 20 | 3.59 | 6.5 | 10 | 2.85 | 5 | 10 | 2.68 | 4.5 | 13 | 2.77 | 4 | 10 | 3.01 | 6 | 14 | 3.16 | 7 | 9 | 3.50 | 6 | NS* |
| 7. | 72 | 2.90 | 4 | 20 | 3.13 | 2 | 10 | 2.16 | 2 | 10 | 2.14 | 2 | 13 | 2.36 | 2 | 10 | 2.55 | 2 | 14 | 2.68 | 2 | 9 | 2.95 | 1 | NS* |

Interpretation of the Effectiveness Scale: 1-1.49 = very good; 1.50-2.49 = good; 2.50-3.49 = fair; 3.50-4.49 = poor; 4.50-5 = very poor.

*No significant difference at 0.1 level.

[1] Refer to Table 13.8

the goal that was concerned with providing students with the opportunities of using themselves as therapeutic media was ranked 1 in seven provincial hospitals, indicating that it was better attained compared to other goals of clinical practice. The goal that was concerned with providing students with opportunities of performing administrative functions was ranked 1 in one hospital and 2 in six hospitals indicating this was the second better attained goal compared to the other goals.

The analysis of variance using the F ratio did not reveal that one hospital was more effective in the attainment of goals of clinical practice than all the others.

## Discussion of Findings

Although the analysis of variance using the F ratio did not reveal that two hospitals were significantly different at the 0.1 level, the findings of this study provide support for Andrews' (1978:246) study in which students' perceptions of program effectiveness were not significantly different on all the variables that were used to determine effectiveness. An examination of the overall mean scores of effectiveness variables for each hospital revealed that effectiveness of clinical practice in each provincial hospital was perceived to be "fair". The highest overall mean score based on the seven effectiveness variables was 3.28 and the lowest overall mean score of effectiveness was 2.52 indicating the effectiveness of clinical practice in all the eight provincial hospitals was perceived to be "fair". Table 13.7 presents the eight provincial hospitals and the overall mean scores based on the seven effectiveness variables.

### Table 13.7

### OVERALL MEAN SCORES OF EFFECTIVENESS BASED ON SEVEN EFFECTIVENESS VARIABLES

| Hospital | Mean Score |
|---|---|
| Nakuru | 2.52 |
| Nyeri | 2.59 |
| Kakamega | 2.81 |
| Machakos | 2.84 |
| Kenyatta National hospital | 2.93 |
| Nyanza | 3.13 |
| Coast | 3.25 |
| Mathari | 3.28 |

This data treatment suggested that the hospitals that had the lowest mean scores were perceived to be more effective in attaining the goals of clinical practice. However, in making such conclusions one should be very cautious since the analysis of variance did not reveal that two hospitals were significantly different at the 0.1 level. Also, as Ratsoy (1981:1) points out:

> . . . there is a lack of agreement on the meaning of organizational effectiveness, on the criteria to be used for its assessment and on how it may be attained.

The findings on effectiveness in this study revealed that one goal that was concerned with ". . . providing the students with the opportunities of using themselves as therapeutic media" was ranked first in seven hospitals. The perceived effectiveness on the other goals varied to some extent. Tests of significance revealed significantly different pairs for the effectiveness measures for each of the eight hospitals. Thus, the findings of this study provide support to Hall's (1971:67) statement in which he commented that "because organizations have multiple and at times conflicting goals, an organization can be effective on one measure but ineffective on another."

## RELATIONSHIPS BETWEEN LINKAGE DIMENSIONS AND EFFECTIVENESS

### Sub-Problem 7

"What were the relationships between the forms of linkages and the effectiveness of clinical practice?"

In order to determine the relationships between the linkage indicators and the effectiveness of clinical practice the Pearson product moment correlation coefficients were computed. Table 13.8 presents Pearson correlation coefficients between linkage indicators and Effectiveness variable. The observed relationships indicated that there were positive and negative relationships between the degree of frequency of interaction, relative resource commitment and resource reciprocity and the effectiveness variables in the departments of physiotherapy and occupational therapy.

The relationships between the resource reciprocity and all the effectiveness variables were found to be positive in the departments of occupational therapy. The correlation ranged from r = 0.12 to r = 0.58. The relationships between the frequency of interaction and all the effectiveness variables were found to be positive in the departments of physiotherapy. The correlation ranged from r = 0.22 to r = 0.71.

## Table 13.8

PEARSON CORRELATION COEFFICIENTS BETWEEN LINKAGE INDICATORS AND EFFECTIVENESS VARIABLES
(N = 6)

| EFFECTIVENESS VARIABLES | LINKAGE DIMENSIONS | | | | | |
|---|---|---|---|---|---|---|
| | OCCUPATIONAL THERAPY DEPARTMENTS | | | PHYSIOTHERAPY DEPARTMENTS | | |
| | Frequency of Interaction | Relative Resource Commitment | Resource Reciprocity | Frequency of Interaction | Relative Resource Commitment | Resource Reciprocity |
| **BROAD GOAL STATEMENT** | | | | | | |
| SECTION A | | | | | | |
| 1. Providing the students with the opportunities of evaluating patients. | 0.01 | 0.14 | 0.22 | 0.71 | 0.14 | -0.23 |
| SECTION B | | | | | | |
| 2. Providing the students with the opportunities of formulating aims of treatment and carrying out Treatment. | 0.17 | -0.09 | 0.45 | 0.49 | -0.09 | -0.12 |
| SECTION C | | | | | | |
| 3. Providing the students with the opportunities of broadening their medical terminology and knowledge. | 0.46 | -0.24 | 0.42 | 0.47 | -0.25 | -0.33 |
| SECTION D | | | | | | |
| 4. Providing the students with the opportunities of using themselves as therapeutic media. | 0.17 | 0.01 | 0.42 | 0.59 | 0.01 | -0.29 |
| SECTION E | | | | | | |
| 5. Providing the students with the opportunities of developing communication skills. | -0.23 | 0.16 | 0.58 | 0.58 | 0.16 | 0.12 |
| SECTION F | | | | | | |
| 6. Providing the students with the opportunities of developing professional attitudes. | -0.20 | 0.45 | 0.12 | 0.22 | 0.45 | -0.39 |
| SECTION G | | | | | | |
| 7. Providing the students with the opportunities of performing administrative functions. | -0.34 | 0.47 | 0.23 | 0.33 | 0.47 | -0.20 |

## Discussion of Findings

According to Andrews (1978:249) indicators of high degree of formalization, relative resource commitment and standardization were associated with measures of effectiveness. The observed relationships in this study did not support Andrews' (1978) study. The limited effectiveness measures that were used in this study may have accounted for the differences observed between the two studies. However, it may be noted too, that the perceptual data in Andrews' (1978) study did not show any clear relationships between the linkage dimensions and the effectiveness of the programs studied.

Another interesting point to note in this study is that the similarity of the degree of formalization and procedural standardization that were found in all the hospitals studied imposed some problems since no relationships could be determined between the degree of formalization, relative resource commitment and procedural standardization as in the study of Andrews' (1978). Thus, the linkage indicators and the effectiveness variables did not provide clear insights regarding their relationships as predicted earlier in the study.

## SUMMARY

This chapter presented a comparative analysis of the eight provincial general hospitals that were studied. The chapter was divided into four sections: the first section presented comparative analysis of linkage dimensions. The second section presented statistical analyses of three sub-problems on overall effectiveness and two sub-problems on the ideal importance of broad goals. The third section compared the effectiveness of clinical practice in the eight provincial hospitals and the fourth section examined possible relationships between linkage dimensions and effectiveness.

The data on linkage dimensions revealed that the degree to which the provincial hospital were formalized with the Medical Training Centre in the departments of occupational therapy and physiotherapy were identical. The first indicator of formalization revealed that there were informal agreements between the Medical Training Centre and each provincial hospital in the two departments. The second indicator of formalization showed that there was formal coordination of students' clinical practical in the departments of occupational therapy but in the departments of physiotherapy there was informal coordination of students' clinical practice.

Two indicators were used to determine the degree of intensity of relationship between the Medical Training Centre and the provincial hospitals. These were: (1) frequency of interaction and (2) relative resource commitment. The frequency of interactions between the Medical Training Centre and four provincial hospitals in the departments of occupational therapy and physiotherapy was found to be high. Also, the frequency of interactions between the Medical Training Centre and five occupational therapy and five physiotherapy departments in the provincial hospitals was found to be low. The relative resource commitment between the Medical Training Centre and seven occupational therapy departments, and five physiotherapy departments was found to be low. However, the relative resource commitment between the Medical Training Centre and three occupational therapy, and two physiotherapy departments was found to be high.

The third linkage dimension that was studied was reciprocity of the relationship. The first indicator of reciprocity revealed that there were bilateral exchanges of resources between the Medical Training Centre and all the departments of occupational therapy. However, it was revealed that only six physiotherapy departments had bilateral exchanges of resources with the Medical Training Centre. Five occupational therapy departments and two physiotherapy departments had both bilateral and unilateral exchanges of resources. The resources that were unilaterally exchanged were from the Medical Training Centre to the provincial hospitals. Such resources were therapeutic aids and equipment that were made by the physiotherapy and occupational therapy students. The second indicator of reciprocity showed that seven departments of occupational therapy and physiotherapy had mutual agreements with the Medical Training Centre on the exchanges of resouces. However, it was reported that in the department of occupational therapy in Mathari hospital and in the department of physiotherapy in Nakuru hospital there appeared to be unilateral decisions that were made at the Medical Training Centre. The unilateral decisions that were made at the Medical Training Centre were concerned with the involvement of tutors and clinical instructors in evaluating students' performance during clinical practice. The hospital staff felt that they contributed very little on such decisions.

The last linkage dimension that was examined was procedural standardization. The standardization of procedures between the Medical Training Centre and all the provincial hospitals was found to be low.

The second section of the chapter presented findings on the overall effectiveness as perceived by different groups of respondents.

The findings did not identify major differences. The comparison of mean scores on the overall effectiveness revealed that the mean scores of occupational therapy students were significantly different from the mean scores of staff occupational therapists on six effectiveness variables. The occupational therapy students perceived the clinical practice to be less effective. No significant differences were found at the 0.05 level between the mean scores of physiotherapists and occupational therapists in six effectiveness variables.

The findings on the ideal importance of broad goals indicated that the goals of clinical practice were perceived to be "very important" and "important" by the occupational therapy and physiotherapy respondents.

The last section of the chapter examined possible relationships between the linkage indicators and the effectiveness of clinical practice. The Pearson product moment correlation coefficients showed that there were positive and negative relationships between the linkage indicators and the effectiveness variables. The observed relationships revealed two interesting results. These were: (1) the relationships between the frequency of interaction and all effectiveness variables were positive in the departments of physiotherapy and (2) the relationships between resource reciprocity and all effectiveness variables were also positive in the departments of occupational therapy.

Interpreting the findings on relationships between linkage indicators and effectiveness presented some problems since most of the linkage dimensions were similar. Also since this study examined linkage dimensions between one medical training institution and eight hospitals, it was difficult to make any conclusions regarding effectiveness and linkage dimensions.

# CHAPTER 14

# SUMMARY, CONCLUSIONS, IMPLICATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

This chapter is divided into four sections: (1) summary of the study and its findings; (2) conclusions; (3) implications; and (4) suggestions for further research.

## SUMMARY OF THE STUDY

### Purpose of the Study

The purposes of the study were: (1) to describe interorganizational linkages between the Medical Training Centre (MTC) and the provincial hospitals in the departments of occupational therapy and physiotherapy in Kenya; (2) to determine the effectiveness of clinical practice in the provincial hospitals; (3) to determine the ideal importance of broad goals of clinical practice; and (4) to examine the relationships between the forms of linkages and the effectiveness of clinical practice.

To accomplish the purposes of the study the following subproblems pertaining to linkage activities, effectiveness and ideal importance of broad goals were formulated.

## PROBLEM 1: FORMALIZATION

Sub-Problem 1.1

Were there formal or informal agreements between the MTC and the provincial general hospitals in the departments of occupational therapy and physiotherapy?

Sub-Problem 1.2

Was there formal or informal co-ordination of students' clinical practice between the MTC and the provincial general hospitals in the departments of occupational therapy and physiotherapy?

## PROBLEM 2: INTENSITY

Sub-Problem 2.1

What was the frequency of interactions between the MTC and the provincial general hospitals in the departments of occupational therapy and physiotherapy?

Sub-Problem 2.2

What were the relative resource commitments between the MTC and the provincial general hospitals in the departments of occupational therapy and physiotherapy?

## PROBLEM 3: RECIPROCITY

Sub-Problem 3.1

Were there unilateral or bilateral exchanges of resources between the MTC and the provincial general hospitals in the departments of occupational therapy and physiotherapy?

Sub-Problem 3.2

Were the conditions of resource exchanges between the MTC and the provincial general hospitals in the departments of occupational therapy and physiotherapy mutually agreed upon?

## PROBLEM 4: STANDARDIZATION

Sub-Problem 4.1

To what extent were the rules, regulations and procedures for carrying out transactions between the MTC and the provincial general hospitals in the departments of occupational therapy and physiotherapy clearly defined?

## PROBLEM 5: EFFECTIVENESS

Sub-Problem 5.1

What were the perceptions of both the occupational therapy and physiotherapy respondents in each provincial general hospital on the effectiveness of clinical practice?

Sub-Problem 5.2

What were the perceptions of the four sub-groups of respondents, namely physiotherapists, occupational therapists, physiotherapy students and occupational therapy students on the overall effectiveness of clinical practice?

Sub-Problem 5.3

Were there differences among the four sub-groups of respondents in their perceptions of the overall effectiveness of clinical practice?

Sub-Problem 5.4

Were there differences between the occupational therapy and physiotherapy respondents in their perceptions of the overall effectiveness of clinical practice?

## PROBLEM 6: IDEAL IMPORTANCE OF BROAD GOAL STATEMENTS

Sub-Problem 6.1

What were the perceptions of both the occupational therapy and physiotherapy respondents in each provincial general hospital on the ideal importance of broad goals of clinical practice?

Sub-Problem 6.2

Were there differences between the occupational therapy and physiotherapy respondents in their perceptions of the ideal importance of broad goals of clinical practice?

Sub-Problem 6.3

Were there differences among the four sub-groups of respondents in their perceptions of the ideal importance of broad goals of clinical practice?

Sub-Problem 7

What were the relationships between the forms of linkages and the effectiveness of clinical practice?

## Research Variables

The major research variables were the linkage and effectiveness variables. The linkage variables were: (1) formalization; (2) intensity; (3) reciprocity; and (4) standardization. The effectiveness variables were the seven broad goal statements of clinical practice in occupational therapy and physiotherapy. These were: (1) evaluation of patients; (2) formulation of aims of treatment and carrying out treatment; (3) broadening medical terminology and knowledge; (4) developing communication skills; (5) using self as a therapeutic medium; (6) developing professional attitudes and (7) performing administrative functions.

## Significance of the Study

The study was significant on both theoretical and practical grounds. As Young (1979) notes there is a need for further research using theoretical constructs of organizational linkages and effectiveness. The work of such people as Marrett (1971), Hasenfeld and English (1974), Van De Ven (1976), Hall (1977) and Andrews (1978) suggested that further research on interorganizational linkages may provide useful information for interorganizational theory. As Van De Ven (1976) notes, no generally accepted framework, theory or methods have emerged from research or practice for the study of interorganizational relationships.

In terms of practical significance, the Medical Training Centre and the provincial hospitals in Kenya are dependent on each other in order to achieve their goals. The interorganizational linkages that are developed between these organizations may result in an effective or ineffective clinical practice for students. Thus, examining the forms of linkages between the Medical Training Centre and the provinical hospitals could, perhaps provide information on how to increase the effectiveness of clinical practice in physiotherapy and occupational therapy.

## Conceptual Framework

The conceptual framework for the study encompassed the linkage dimensions and the effectiveness of clinical practice. The specific linkage dimensions that were examined were the degree of formalization of the relationship, the degree of intensity of the relationship, the degree of reciprocity of the relationship and the degree of standardization of the relationship between the Medical Training Centre and the provincial hospitals in two allied health professions.

## Respondents in the Study

The first group of respondents in the study were qualified occupational therapists and physiotherapists who worked in the provincial hospitals and the second group of respondents were the third year occupational therapy and physiotherapy students who had completed clinical practice in these hospitals.

## Provincial General Hospitals Assessed

The effectiveness of clinical practice was assessed in the following eight provincial hospitals: (1) Kenyatta National hospital, (2) Mathari hospital, (3) Nyeri provincial hospital, (4) Nyanza provincial hospital, (5) Nakuru provincial hospital, (6) Kakamega provincial hospital, (7) Machakos provincial hosptial and (8) Coast general hospital.

## Development and Validation of Instruments

Two instruments were utilized in this study. These were: (1) a questionnaire and (2) a semi-structured interview guide. The questionnaire had three parts. The first part of the questionnaire contained ten items designed to collect data on demographic variables; the second part had seventy items that were developed to provide data on the effectiveness of the clinical practice and on the ideal importance of a variety of goals. These two parts of the questionnaire were completed by all the respondents in the study. Part 3 of the questionnaire had thirty-one items that were developed to provide data on linkage dimensions. This part of the questionnaire was completed by department heads in the hospitals and by department heads at the Medical Training Centre in both the departments of physiotherapy and occupational therapy.

In order to validate the questionnaire a pilot study was conducted using twenty-four respondents from the Faculty of Rehabilitation Medicine, University of Alberta and two experts in instrument development from the Department of Educational Administration, University of Alberta. The results of the pilot study indicated that some items needed revision. These revisions were made and incorporated into the final questionnaire.

## Reliability of the Questionnaire

Two approaches to testing the reliability of the questionnaire were used. One involved computing a coefficient of internal consistency and the other involved calculating alpha coefficient. The reliability coefficient obtained was r = 0.98 and the alpha coefficient was 0.99 both of which indicated that reliability of the questionnaire was high.

### Interview Guide

A semi-structured interview guide was developed to gather in-depth information on linkage activities and on the effectiveness of clinical practice. The interview guide had seventeen questions. In order to validate the interview guide four physiotherapists and three occupational therapists in Kenyatta National Hospital were requested to criticize and to give suggestions on the content validity of the interview guide. The respondents' comments and suggestions revealed that some questions were unclear or too long. All the necessary revisions were incorporated into the final interview guide.

### Research Methodology

Permission to conduct the study was granted by the Cabinet Affairs Office which is associated with the Office of the President of Kenya with the assistance of the Principal of the Medical Training Centre in Nairobi who was also the Senior Deputy Director of Medical Services for Kenya.

The department heads in occupational therapy and physiotherapy in the Kenyatta National Hospital provided lists of names of all the therapists at the various hospitals included in the study. The department heads of occupational therapy and physiotherapy in the Medical Training Centre provided the names of all the tutors and third year students who were involved in the study.

## Data Collection

During late July, 1980 the questionnaires were sent to the therapists chosen for the study. Those sent to the therapists outside the Nairobi area were mailed and the questionnaires for the therapists in the Nairobi area were delivered by hand. All the respondents were requested to return the completed questionnaire to the Medical Training Centre.

Visits were made to the provincial general hospitals between the 11th and 28th of August, 1980 in order to conduct interviews with the department heads. Since one hospital did not have a physiotherapy department and three department heads were on leave at the time, twelve interviews were conducted and the information gathered was compiled and analyzed soon after.

## Data Analysis

Data from the completed questionnaire were transferred to coding sheets and keypunched for computer analysis.

Analysis for Part A of the questionnaire involved the determination of frequencies and percentages for the occupational therapy and physiotherapy respondents on the basis of eight demographic variables.

The analysis of data for Part B of the questionnaire involved use of descriptive statistics and tests of significance. Means, standard deviations, and rank orders were computed for the effectiveness and ideal importance variables. The analysis of variance test was used to compare mean scores on effectiveness and on ideal importance of the broad goals when more than two groups were being compared. The *t*-test was used when the number of groups being compared was two. Following the analysis of variance where the F ratio was statistically significant, the Scheffé Multiple Comparison of Means was used to determine which pairs of group means differed significantly.

In order to identify which effectiveness variables cluster together, the seventy original effectiveness items were subjected to factor analysis (Varimax rotated matrix). The factor analysis revealed seven factors which were used as the effectiveness variables in further analyses.

Data from Part C of the questionnaire was analyzed to provide information on linkage dimensions. A coding system proposed by Marrett (1971) was used. This system enabled the researcher to summarize the responses along four linkage dimensions. The results of this analysis were then examined to determine if differences on these dimensions existed among the eight provincial hospitals.

### Summary of Research Findings on Linkage Dimensions

The findings associated with the linkage dimensions in the eight provincial hospitals were compared under the headings of formalization, intensity, reciprocity and standardization. Chapters 5 through 12 presented detailed findings on linkage dimensions between the Medical Training Centre and each provincial general hospital in the departments of occupational therapy and physiotherapy.

Formalization. The first indicator of formalization revealed that there were informal agreements for both the departments of occupational therapy and physiotherapy between each of the provincial hospitals and the Medical Training Centre. The second indicator revealed that there was formal co-ordination of students' clinical practice between the Medical Training Centre and all the provincial hospitals in the departments of occupational therapy. However, the co-ordination of students' clinical practice was found to be informal in the physiotherapy departments for all the provincial hospitals.

Intensity. The frequency of interactions between the Medical Training Centre and the departments of occupational therapy and physiotherapy was found to be high in four provincial hospitals and low in five provincial hospitals. Both the departments of physiotherapy and occupational therapy in the Machakos general provincial hospital were found to have both high and low frequency of interactions with the Medical Training Centre. The students in both professions interacted with the tutors very often and the clinical instructors in the department of occupational therapy communicated with the tutors about students progress during clinical practice.

The relative resource commitment between the Medical Training Centre and the departments of occupational therapy was found to be low in seven provincial hospitals and high in three provincial hospitals. The departments of occupational therapy in the Mathari hospital and the Coast general hospital were found to have both high and low resource commitments depending on the type of resources that were shared or exchanged. For example, in the Mathari hospital four or more students were provided with facilities for clinical practice in the departments of occupational therapy whereby in the department of occupational therapy in the Coast general hospital only one student was provided with facilities for clinical practice.

The relative resource commitment between the Medical Training Centre and the departments of physiotherapy was found to be low in five provincial hospitals and high in one provincial hospital.

Reciprocity. The first indicator of reciprocity revealed that there were five departments of occupational therapy and two departments of physiotherapy that had both bilateral and unilateral exchanges of resources with the Medical Training Centre. Eight departments of occupational therapy and six departments of physiotherapy were found to have bilateral exchanges of resources with the Medical Training Centre.

The second indicator of reciprocity revealed that there were mutual agreements between the Medical Training Centre and seven provincial hospitals in the departments of physiotherapy and occupational therapy. However, definitional reciprocity was reported to be unilateral between the Mathari hospital in the department of occupational therapy and the Nakuru provincial hospital in the department of physiotherapy. Although, there were some unilateral decisions made at the Medical Training Centre, it appeared that no one organization seemed to dominate its partner.

Standardization. The one indicator of standardization that was used revealed a low procedural standardization between the Medical Training Centre and all the provincial hospitals in the departments of physiotherapy and occupational therapy.

### Summary of Research Findings on Overall Effectiveness of Clinical Practice in Each Provincial Hospital

The overall mean scores of seven effectiveness variables for the eight provincial hospitals that were studied revealed that the effectiveness of clinical practice in each hospital was perceived to be "fair" according to the scale used. However, in all the provincial hospitals the goal that was concerned with ". . . providing the students with the opportunities of using themselves as therapeutic media" was perceived to be better attained compared to the attainment of the other six goals. The analysis of variance revealed that no two mean scores of effectiveness among the eight provincial hospitals were significantly different at the 0.01 level.

### Summary of Research Findings on the Overall Effectiveness as Perceived by the Four Sub-Groups of Respondents

One way analysis of variance was used to compare the overall effectiveness of clinical practice as perceived by the four sub-groups of respondents. Following the analysis of variance where the F ratio was statistically significant at the 0.05 level the Scheffe Multiple Comparison of Means was used to determine which pairs group mean scores were significantly different.

The mean scores of occupational therapy students were significantly different from the mean scores of staff occupational therapists in six effectiveness variables. The staff occupational therapists perceived the clinical practice to be more effective while the occupational therapy students perceived the clinical practice to be less effective. Also, the physiotherapy students perceived the clinical practice to be less effective than did the physiotherapists. Thus, the qualified therapists in both professions perceived the clinical practice to be more effective and the third year students in both professions perceived the clinical practice to be less effective.

## Summary of Research Findings on the Overall Effectiveness of Clinical Practice as Perceived by Occupational Therapy and Physiotherapy Respondents

The t-test indicated that there were no significant differences at the 0.01 level between the mean scores of occupational therapy respondents in their perceptions regarding the attainment of the following five goals of clinical practice: (1) evaluating patients; (2) formulating aims of treatment and carrying out treatment; (3) broadening medical knowledge and terminology; (4) using self as a therapeutic medium and (5) developing communication skills. However, the mean scores of physiotherapy respondents and occupational therapy respondents for the attainment of the goal that was concerned with ". . . providing the students with the opportunities of developing professional attitudes" were significantly different at the 0.01 level. The occupational therapy respondents perceived the attainment of this goal to be better compared to the physiotherapy respondents. The mean scores of physiotherapy respondents and occupational therapy respondents for the attainment of the goal that was concerned with ". . . providing the students with the opportunities of performing administrative functions" were significantly different at the 0.05 level.

The occupational therapy respondents perceived the attainment of this goal to be better compared to the physiotherapy respondents.

## Summary of Research Findings on the Ideal Importance of Broad Goals

The t-test showed that there were no significant differences at the 0.05 level in the mean scores of the physiotherapy respondents and occupational therapy respondents on the ideal importance of six broad goals of clinical practice. However, the t-test indicated that there was a significant difference at the 0.05 level between the mean scores of physiotherapy respondents and occupational therapy respondents for the goal that was concerned with ". . . providing the students with the opportunities of performing administrative functions". The physiotherapy respondents perceived this goal to be less important compared to the occupational therapy respondents.

### Summary of Research Findings on the Relationships Between Linkage Dimension and Effectiveness

For the departments of occupational therapy the seven effectiveness variables had a positive correlation coefficient with resource reciprocity. The correlations ranged from r = 0.12 to r = 0.58. The perceived attainment of the goals that were concerned with (1) developing communication skills, (2) formulating aims of treatment and carrying out treatment, (3) using self as a therapeutic medium and (4) broadening medical knowledge and terminology correlated highly with resource reciprocity.

For the departments of physiotherapy each of the effectiveness variables had positive correlation coefficients with the frequency of interactions. The correlations ranged from r = 0.22 to r = 0.71. The perceived attainment of the goals that were concerned with (1) evaluation of patients, (2) using self as a therapeutic medium, (3) developing communication skills, (4) formulating of aims of treatment and carrying out treatment, and (5) broadening medical knowledge and terminology correlated highly with the frequency of interaction in the departments of physiotherapy.

For the departments of physiotherapy the attainment of six goals of clinical practice correlated negatively with resource reciprocity and for the departments of occupational therapy the attainment of three goals of clinical practice correlated negatively with the frequency of interactions. The attainment of the goals that were concerned with (1) developing communication skills, (2) developing professional attitudes and (3) performing administrative functions had negative correlations with the frequency of interaction in the departments of occupational therapy.

## CONCLUSIONS

Based upon the data examined in this study and the findings obtained, the following conclusions were drawn:

### 1. Utility of Linkage Dimension Approach

The "linkage dimension approach" was found to have utility in examining the relationships between the Medical Training Centre and the provincial hospitals in two allied health professions in Kenya. This approach was useful in determining the following four linkage dimensions between the Medical Training Centre and the provincial hospitals: (1) formalization, (2) intensity, (3) reciprocity; and (4) standardization. However, the relationships between the linkage dimensions and the effectiveness of clinical practice were difficult to determine since the overall ratings of effectiveness of clinical practice in all the provincial hospitals was perceived to be "fair". Therefore it was concluded that no relationships existed between the linkage dimensions and the effectiveness variables.

Hall (1977:470) posited that two fundamental forms of relationships can exist between human service organizations: first, the voluntary interaction in which organizations develop relationships for purposes of specific goal attainment, and second, the mandated interaction in which the basis of interaction is the legal or formal agreement. Based upon the findings obtained in this study it was concluded that the Medical Training Centre and each of the provincial hospitals in the two allied health professions had voluntary interactions for purposes of specific goal attainment.

### 2. Utility of Goal Approach in Assessing Effectiveness

The "goal approach" in assessing the effectiveness of clinical practice in the provincial hospitals was found to be useful. According to Ghorpade (1971:33); Steers (1977) and Ratsoy (1981) the literature on organizations is rich in the studies in which the criterion for the assessment of effectiveness is derived from organizational goals. Steers (1977:19-20) states that organizational goals can serve the following purposes in organizations: (1) they can serve as a standard of assessment of organizational effectiveness, as they were used in this study; (2) they can constitute as sources of legitimation which justify the organizational activities and its existence; and (3) they can provide a direction for administrators in attempting to acquire and utilize resources. In this study it was concluded that the "goals approach" was useful in determining the extent to which the seven broad goals of clinical practice were achieved in the provincial hospitals in both the departments of occupational therapy and physiotherapy in Kenya. The effectiveness variables were the seven broad goals of clinical practice in physiotherapy and occupational therapy. The ratings of effectiveness by occupational therapy students and physiotherapy students were found to be lower than the ratings of the occupational therapists and physiotherapists in all the provincial hospitals. These findings suggest that programs which students in both occupational therapy and physiotherapy consider ineffective may be considered as effective by the qualified physiotherapists and occupational therapists. Also, from these findings it was concluded that the 'goals approach' is useful in determining perceptual differences on effectiveness of clinical practice between students and qualified staff in allied health professions. However, since effectiveness is a difficult construct to determine such a generalization should be cautiously undertaken.

### 3. Key Linkage Variables

The examination of the linkage dimension profiles found in the eight provincial hospitals revealed that the key linkage variables that differed were the degree of frequency of interactions, the degree of relative resource commitment and the degree of resource reciprocity.

The degree of formalization and the degree of procedural standardization were found to be similar in all the provincial hospitals. Thus, in this study it was concluded that a joint co-operative program may have a high degree of resource commitment and a high degree of frequency of interactions without formal agreements and high procedural standardization. This finding supports Hall's (1977:470) contention that organizations may develop voluntary interactions for the purposes of specific goal attainment without formal or legal agreements.

Also, in this study different mechanisms of coordination were found to exist between the Medical Training Centre and the provincial hospitals in the departments of occupational therapy and physiotherapy. Between the Medical Training Centre and the departments of occupational therapy there was formal coordination of clinical practice for students and between the Medical Training Centre and the departments of physiotherapy there was informal coordination of clinical practice for students. This finding lead to the conclusion that organizations may develop different mechanisms of coordination which might or might not be appropriate for the specific relationship. In this study, although there were different coordination mechanisms in the departments of occupational therapy and physiotherapy, the physiotherapy respondents and the occupational therapy respondents perceived the overall effectiveness of clinical practice to be the same in each provincial hospital.

## IMPLICATIONS

On the basis of findings and conclusions derived from this study, a number of implications can be identified for consideration. The implications are divided into three sections: (1) implications for interorganizational theory, (2) implications for administrators in hospitals and allied health training programs and (3) implications for effectiveness of clinical practice in allied health programs.

### Implications for Interorganizational Theory

One of the purposes of this study was to examine the relationships between a medical training institution and provincial hospitals in two allied health professions in Kenya to see if a given linkage dimension profile was related to effectiveness. The correlation coefficients between the linkage dimensions and effectiveness appeared to vary. At the onset of the study it was expected that specific linkage dimensions would result in different degrees of effectiveness. However, since no statistical significant differences were found in the overall effectiveness of clinical practice in all the provincial hospitals it was difficult to generalize about the relationships between linkage dimension profiles and effectiveness. The findings suggest that more research is needed to explore other factors that have impact on the effectiveness of clinical practice in the two allied health professions.

The second implication for interorganizational theory relates to coordination of activities. In all the departments of occupational therapy there was formal coordination of students' clinical practice whereas in all the departments of physiotherapy there was informal coordination of students' clinical practice. However, when the ratings of effectiveness of occupational therapy and physiotherapy respondents were compared there were no differences found. These findings suggest that informal and formal coordination mechanisms are appropriate for a specific relationship as Hall (1977:470) pointed out. The important implication of these findings is that there could be compelling reasons for some organizations to develop formal or informal coordination mechanisms. It would be useful to explore why some allied health programs develop formal coordination while others do not.

The final implication for interorganizational theory from the findings of this study relates to the basis of the interorganizational relationships in human service organizations. In this study eight provincial hospitals were examined and the degree of formalization and the degree of procedural standardization in all these hospitals were found to be similar. The findings also revealed that the intensity of the relationship and the reciprocity of the relationship between the Medical Training Centre and the eight provincial hospitals appeared to vary. These findings reveal that the relationships between the Medical Training Centre and the eight provincial hospitals in the two allied health professions were voluntary and informal. Since the basis of the relationships between the Medical Training Centre and the provincial hospitals would logically alter the ways in which these organizations interact, more research is needed to determine whether a change in the linkage structure between these pairs of organizations would have implications for changes in effectiveness of clinical practice.

## Implications for Hospital and Allied Health Program Administrators

The relationship between medical training institutions and teaching hospitals is inseparable. As Derzon (1978:19) notes, "one cannot be great if the other is only good". This kind of a relationship puts pressure on the hospital administrators and on the administrators in allied health programs in trying to maintain a good relationship between these organizations. As indicated earlier, medical training institutions are constantly involved with teaching hospitals as the demand for clinical education increases. This means that administrative personnel should be aware of the forms of linkages that exist between medical training institutions and teaching hospitals in order to ensure that responsibility and accountability are clearly defined during clinical practice for students. All the hospitals studied were found to have informal relations and low procedural standardization in their linkages with the Medical Training Centre. The important issues of responsibility and accountability were left to the hospital staff whose roles were not well defined within the framework of joint cooperative programs. In this case, the hospital administrators and the administrators of allied health programs should ensure that responsibility and accountability mechanisms be established for the clinical part of the training programs.

The second implication for administrators in allied health professions relates to measures of effectiveness of clinical practice. The seven broad goals of clinical practice in both occupational therapy and physiotherapy were the effectiveness variables. The findings in this study did not identify major differences in effectiveness.

The findings in this study suggest that a multiple criterion approach of effectiveness should be utilized by administrators in allied health professions in determining the effectiveness of clinical practice. A multiple criterion approach may include the following indicators: (1) Adaptation (growth, development and control over environment); (2) Goal attainment (achievement, productivity, quality, efficiency and resource acquisition); (3) Integration (satisfaction, climate, open communication and conflict-cohension); and (4) Latency (sense of identity; motivation, royalty and role and norm congruence). Such an approach might provide more information on the effectiveness of clinical practice.

## SUGGESTIONS FOR FURTHER RESEARCH

The major purpose of this study was to determine the relationships between the linkage dimensions and the effectiveness of clinical practice in two allied health professions. The findings of this study revealed that it was difficult to establish any relationships between the linkage dimensions and the effectiveness variables. However, since the goals approach and the relational properties approach were found to be useful in this study it is recommended that a similar study might be conducted in other allied health professions in Kenya to provide more information on the forms of linkages and on the effectiveness of clinical practice. Also, it is recommended that a multiple criterion approach for assessing effectiveness of clinical practice in allied health professions as indicated earlier in this chapter, would be a useful way of getting at this complex subject. Such an approach could contribute to the body of knowledge that constitutes interorganizational theory.

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# APPENDIX A

## Questionnaire

## PART 1

## PERSONAL INFORMATION

Response Number __________

INSTRUCTIONS: This part of the questionnaire is to be completed by clinical instructors, practising therapists, tutors and third year students in the departments of occupational therapy and physiotherapy. Note that the information will only be used to compare the viewpoints of clinical instructors, practising therapists, tutors and third year students in the departments of occupational therapy and physiotherapy.

Please provide the information requested by placing a check mark in the appropriate spaces.

1. Sex
   1. Female __________
   2. Male __________

2. Department
   1. Physiotherapy __________
   2. Occupational Therapy __________

3. Age
   1. 20 years or less __________
   2. 21 - 25 years __________
   3. 26 - 30 years __________
   4. 31 - 35 years __________
   5. 36 - 40 years __________
   6. 41 - 45 years __________
   7. 46 - 50 years __________
   8. 51 - 55 years __________
   9. 56 - 60 years __________
   10. 61 and over years __________

| | | |
|---|---|---|
| 4. Marital Status | 1. Married | __________ |
| | 2. Single | __________ |
| 5. Present Job Grade | 1. Job Grade G | __________ |
| | 2. Job Grade H | __________ |
| | 3. Job Grade J | __________ |
| | 4. Job Grade K | __________ |
| | 5. Job Grade L and over | __________ |
| 6. Present Position | 1. Staff therapist | __________ |
| | 2. Clinical instructor | __________ |
| | 3. Head of department at the Medical Training Centre | __________ |
| | 4. Head of department at the hospital | __________ |
| | 5. Tutor at the Medical Training Centre | __________ |
| | 6. Student | __________ |
| 7. Professional educational attainment | 1. Diploma | __________ |
| | 2. Teaching Diploma and Diploma | __________ |
| | 3. Bachelor's degree | __________ |
| | 4. Master's degree | __________ |
| | 5. Others (specify) | __________ |

8. If you are not a tutor at the Medical Training Centre, please identify the hospital or Unit in which you are presently working in the space below:

Name of hospital or department

______________________________________________

9. How many years have you worked as a therapist? Please specify the number of years on the space provided:

Number of years ____________________

PLEASE PROCEED TO PART 2.

## PART 2

## EFFECTIVENESS OF CLINICAL EXPERIENCE QUESTIONNAIRE

PURPOSE: This part of the questionnaire is designed to determine the effectiveness of clinical experience for third year students in the departments of occupational therapy and physiotherapy in the following Provincial Hospitals:

(1) Kenyatta National Hospital
(2) Mathari Hospital
(3) Nyeri Hospital
(4) Nakuru Hospital
(5) Kisumu Hospital
(6) Kakamega Hospital
(7) Machakos Hospital
(8) Coast Hospital

INSTRUCTIONS: The questionnaire will only be answered by:

(1) practising therapists in occupational therapy and physiotherapy in each of the above hospitals,

(2) tutors at the Medical Training Centre in the departments of occupational therapy and physiotherapy,

(3) and third year students and newly qualified therapists in the departments of occupational therapy and physiotherapy who did their clinical practice in any of these hospitals.

The questionnaire is divided into seven areas A, B, C, D, E, F, and G. Each area has several statements. Please respond to each statement by making two decisions. One decision relates to the importance of each goal and the other decision relates to the effectiveness of clinical practice.

EXAMPLE: (In section A) If you think statement number (1) identifying the patients' problem areas through observation is very important circle (1) on the Left side scale that is provided.

If you think your department, or hospital, is poor in providing opportunities for (1) identifying the patients' areas through observations circle (4) on the Right side scale that is provided.

Please specify the hospital/department that you are evaluating its clinical effectiveness on the space provided:

Name of hospital/department

________________________________________

| Rate the importance of this statement on this scale | What is your opinion about this statement? | Rate the effectiveness of clinical experience on this scale at this hospital or department |
|---|---|---|
| IDEAL IMPORTANCE SCALE | GOAL | EFFECTIVENESS SCALE |
| | SECTION A:<br>Providing the students with the opportunities to evaluate patients | |
| | A: Provides the students with the opportunities for: | |
| 1 2 3 4 5 | (1) Identifying the patients' problem areas through observations. | 1 2 3 4 5 |
| 1 2 3 4 5 | (2) Performing appropriate patient evaluations e.g., muscle testing, joint range of motion. | 1 2 3 4 5 |
| 1 2 3 4 5 | (3) Correctly administering and recording patient evaluations. | 1 2 3 4 5 |
| 1 2 3 4 5 | (4) Correctly interpreting the results of the evaluations made on the patients. | 1 2 3 4 5 |
| 1 2 3 4 5 | (5) Evaluationg patients jointly with the clinical instructors after the treatment. | 1 2 3 4 5 |
| 1 2 3 4 5 | (6) Periodically reevaluating the patients. | 1 2 3 4 5 |
| 1 2 3 4 5 | (7) Writing the patients' final evaluation results. | 1 2 3 4 5 |

| Rate the importance of this statement on this scale | What is your opinion about this statement? | Rate the effectiveness of clinical experience on this scale at this hospital or department |
|---|---|---|
| IDEAL IMPORTANCE SCALE | GOAL | EFFECTIVENESS SCALE |
| | SECTION A:<br>Providing the students with the opportunities to evaluate patients | |
| | A: Provides the students with the opportunities for: | |
| 1 2 3 4 5 | (8) Evaluating patients' vocational skill and preparedness for specific work settings after treatment, | 1 2 3 4 5 |
| 1 2 3 4 5 | (9) Evaluating patients' abilities to use community resources before discharge, | 1 2 3 4 5 |

| Rate the importance of this statement on this scale | What is your opinion about this statement? | Rate the effectiveness of clinical experience on this scale at this hospital or department |
|---|---|---|
| IDEAL IMPORTANCE SCALE | GOAL | EFFECTIVENESS SCALE |

| Very Important | Important | Moderately Important | Of Little Importance | Not Important | SECTION B:<br>Providing the students with the opportunities of Formulating Aims of Treatment and Carrying Out Treatment | Very good | Good | Fair | Poor | Very Poor |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | B: Provides the students with the opportunities for: | | | | | |
| 1 | 2 | 3 | 4 | 5 | (1) Discussing with the clinical instructors the purpose of treatment plans. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (2) Developing skills in formulating treatment goals for the patients. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (3) Developing skills in choosing appropriate therapeutic media to achieve the treatment goals. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (4) Selecting treatments which are meaningful to the patient and appropriate for his condition. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (5) Using a variety of therapeutic media to achieve the treatment goals. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (6) Revising or modifying treatment goals periodically or when necessary. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (7) Having their treatment plans checked at successive intervals to ensure patients get adequate treatment. | 1 | 2 | 3 | 4 | 5 |

| Rate the importance of this statement on this scale | What is your opinion about this statement? | Rate the effectiveness of clinical experience on this scale at this hospital or department |
|---|---|---|
| IDEAL IMPORTANCE SCALE | GOAL | EFFECTIVENESS SCALE |

| Very Important | Important | Moderately Important | Of Little Importance | Not Important | Providing the students with the opportunities of Formulating Aims of Treatment and Carrying Out Treatment | Very good | Good | Fair | Poor | Very poor |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | (8) Evaluating and preparing treatment plans for the different diagnoses. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (9) Designing and making certain treatment aids for the patients. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (10) Preparing treatment for the patient in the wards beforehand. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (11) Being introduced to new treatment techniques in the department. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (12) Organizing group and individual treatments. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (13) Modifying or changing equipment during treatment to compensate for the patients' loss of function. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (14) Being aware of behaviour patterns and reactions that aid in promoting the effectiveness of their treatments. | 1 | 2 | 3 | 4 | 5 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rate the importance of this statement on this scale | | | | | What is your opinion about this statement? | Rate the effectiveness of clinical experience on this scale at this hospital or department. | | | | |
| IDEAL IMPORTANCE SCALE | | | | | GOAL | EFFECTIVENESS SCALE | | | | |
| Very Important | Important | Moderately Important | Of Little Importance | Not Important | SECTION C:<br>Providing the students with the opportunities of broadenin their Medical Terminology and Knowledge. | Very good | Good | Fair | Poor | Very poor |
| | | | | | C: Provides the students with the opportunities for: | | | | | |
| 1 | 2 | 3 | 4 | 5 | (1) Using medical terminology in writing up patient interviews and progress reports. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (2) Obtaining information on various diagnoses and their relevant treatment techniques. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (3) Developing an interest in doing simple clinical settings. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (4) Applying theoretical concepts in clinical settings. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (5) Increasing their medical knowledge through library research. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (6) Attending special lectures, surgical operations and treatment sessions. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (7) Doing relevant assignments which are graded by the clinical instructors. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (8) Learning medical conditions and treatments through lectures, discussions and case studies. | 1 | 2 | 3 | 4 | 5 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rate the importance of this statement on this scale | | | | | What is your opinion about this statement? | Rate the effectiveness of clinical experience on this scale at this hospital or department | | | | |
| IDEAL IMPORTANCE SCALE | | | | | GOAL | EFFECTIVENESS SCALE | | | | |
| Very Important | Important | Moderately Important | Of Little Importance | Not Important | SECTION D:<br>Providing the students with the opportunities of developing Communication Skills. | Very good | Good | Fair | Poor | Very Poor |
| | | | | | D: Provides the students with the opportunities for: | | | | | |
| 1 | 2 | 3 | 4 | 5 | (1) Preparing thorough presentations in verbal and written communications of patients' problems or progress. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (2) Reporting the progress of patients clearly and accurately during ward rounds. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (3) Developing interviewing techniques. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (4) Developing verbal communication skills while performing group treatments. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (5) Writing periodic and accurate notes on the progress or lack of progress of patients. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (6) Formulating and giving instructions to patients during treatment sessions. | 1 | 2 | 3 | 4 | 5 |

| Rate the importance of this statement on this scale | | | | | What is your opinion about this statement? | Rate the effectiveness of clinical experience on this scale at this hospital or department | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| IDEAL IMPORTANCE SCALE | | | | | GOAL | EFFECTIVENESS SCALE | | | | |
| Very Important | Important | Moderately Important | Of Little Importance | Not Important | SECTION E: Providing the students with the opportunities of Using Themselves as Therapeutic Media. | Very good | Good | Fair | Poor | Very poor |
| | | | | | E: Provides the students with the opportunities for: | | | | | |
| 1 | 2 | 3 | 4 | 5 | (1) Developing relationships with patients based on mutual trust and respect. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (2) Working closely with a variety of patients. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (3) Observing and handling various safety precautions while dealing with the patients. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (4) Responding to and dealing effectively with attitudes displayed by the patients. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (5) Being aware of their personality and how it can aid in providing effective treatment, i.e. sense of humor, gentleness and firmness. | 1 | 2 | 3 | 4 | 5 |

| Rate the importance of this statement on this scale | What is your opinion about this statement? | Rate the effectiveness of clinical experience on this scale at this hospital or department |
|---|---|---|
| IDEAL IMPORTANCE SCALE | GOAL | EFFECTIVENESS SCALE |

**SECTION F:**

Providing the students with the opportunities of performing Administrative Functions.

| Very Important | Important | Moderately Important | Of Little Importance | Not Important | | Very good | Good | Fair | Poor | Very poor |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | F: Provides the students with the opportunities for: | | | | | |
| 1 | 2 | 3 | 4 | 5 | (1) Understanding the procedures for ordering department equipment, tools and supplies. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (2) Discussing with the hospital staff, e.g. clinical instructors, department rules, regulations and policies. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (3) Keeping up-to-date records on the patients assigned to them. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (4) Discussing with the hospital staff e.g. clinical instructors, any department plans and innovations. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (5) Learning how to maintain equipment, tools and materials in the department. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (6) Coordinating patients' treatment plans with those of other medical team members who are treating the same patients. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (7) Visiting other departments in order to make them aware of other forms of treatment. | 1 | 2 | 3 | 4 | 5 |

| Rate the importance of this statement on this scale | What is your opinion about this statement? | Rate the effectiveness of clinical experience on this scale at this hospital or department |
|---|---|---|
| IDEAL IMPORTANCE SCALE | GOAL | EFFECTIVENESS SCALE |

**SECTION F:**

**Providing the students with the opportunities of performing Administrative Functions.**

| Very Important | Important | Moderately Important | Of Little Importance | Not Important | F: Provides the students with the opportunities for: | Very good | Good | Fair | Poor | Very poor |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | (8) Participating actively in interdepartmental meetings when necessary. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (9) Getting feedback on their performance from hospital staff e.g. clinical instructors during the mid-term and final term evaluations. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (10) Understanding appropriate procedures and techniques of evaluating department facilities for use by students. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (11) Understanding how to construct a timetable. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (12) Developing skills to deal with interpersonal conflict and promote good communication and cooperation between the students and staff members. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (13) Understanding the procdures for selling articles that are made by patients in the department. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (14) Developing skills in determining the effectiveness of clinical practice. | 1 | 2 | 3 | 4 | 5 |

| Rate the importance of this statement on this scale | | | | | What is your opinion about this statement? | Rate the effectiveness of clinical experience on this scale at this hospital or department | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| IDEAL IMPORTANCE SCALE | | | | | GOAL | EFFECTIVENESS SCALE | | | | |
| Very Important | Important | Moderately Important | Of Little Importance | Not Important | SECTION F: Providing the students with the opportunities of performing Administrative Functions.<br>F: Provides the students with the opportunities for: | Very good | Good | Fair | Poor | Very poor |
| 1 | 2 | 3 | 4 | 5 | (15) Developing patient record-keeping in the department. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (16) Developing skills in planning and coordinating staff schedules. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (17) Developing skills in setting up and maintaining an inventory of equipment, tools and materials in the department. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (18) Developing skills in establishing and reviewing departmental goals and objectives. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (19) Developing skills in determining staff requirements in the department. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (20) Developing skills in coordinating intra and inter disciplinary services in the department. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (21) Developing skills in maintaining financial records in the department. | 1 | 2 | 3 | 4 | 5 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rate the importance of this statement on this scale | | | | | What is your opinion about this statement? | Rate the effectiveness of clinical experience on this scale at this hospital or department | | | | |
| IDEAL IMPORTANCE SCALE | | | | | GOAL | EFFECTIVENESS SCALE | | | | |
| Very Important | Important | Moderately Important | Of Little Importance | Not Important | SECTION G:<br>Providing the students with the opportunities of developing Professional Attitudes | Very good | Good | Fair | Poor | Very poor |
| | | | | | G: Provides the students with the opportunities for: | | | | | |
| 1 | 2 | 3 | 4 | 5 | (1) Observing the professional codes of ethics. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (2) Dealing effectively with negative attitudes displayed by patients. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (3) Developing a helpful attitude toward the patients. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (4) Accepting responsibility for those patients assigned to them. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (5) Developing a good rapport with the patients and staff members. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (6) Developing a strong interest in professional development. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | (7) Expressing freely their opinions and ideas concerning the profession. | 1 | 2 | 3 | 4 | 5 |

PLEASE PROCEED TO PART 3 ON THE NEXT PAGE

## PART 3

PURPOSE: This part of the questionnaire is designed to investigate interorganizational linkages between the Medical Training Centre and the hospitals in which students in the departments of occupational therapy and physiotherapy do their clinical practice.

INSTRUCTIONS: The questionnaire will only be answered by;

(1) the department heads in occupational therapy and physiotherapy in the hospitals shown below:

(1) Kenyatta National Hospital
(2) Mathari Hospital
(3) Nyeri Hospital
(4) Nakuru Hospital
(5) Kisumu Hospital
(6) Kakamega Hospital
(7) Machakos Hospital
(8) Coast Hospital

The questionnaire is divided into four (4) linkage dimensions. These are:

(1) the formalization of the relationship;

(2) the intensity of the relationship;

(3) the reciprocity of the relationship, and

(4) the standardization of the relationship between the Medical Training Centre and the hospitals. Each linkage dimension has several items to be answered.

Please respond to every item in every linkage dimension by circling one number on the scale provided.

## SECTION A

## FORMALIZATION OF THE RELATIONSHIP BETWEEN THE MEDICAL TRAINING CENTRE AND THE PROVINCIAL HOSPITAL

### A:1 Formal Agreement

1. Which of the following statements best describes the nature of the agreement between the Medical Training Centre and your hospital?

   There is a:

   1. Ministerial formal agreement.
   2. Written contract between the Medical Training Centre staff and the hospital staff.
   3. Written agreement between the tutors and the hospital staff.
   4. Informal agreement between the Medical Training Centre and the hospital.
   5. Not applicable.

2. Which of the following statements best describes the nature of the agreement between the Medical Training Centre and your hospital during students' clinical practice?

   1. Ministerial formal agreement.
   2. Written agreement between the Medical Training Centre and the hospital.
   3. Written agreement between the tutors and the hospital staff.
   4. Informal agreement between the Medical Training Centre and the hospital.
   5. Not applicable.

3. Which of the following statements best describes the nature of the agreement between the Medical Training Centre and your hospital on the exchange or sharing of resources, e.g. equipment, funds, materials, clinical instructors and tutors?

   There is a:

   1. Ministerial formal agreement.
   2. Written agreement between the Medical Training Centre and the hospital.
   3. Written agreement between the tutors and the hospital staff.
   4. Informal agreement between the Medical Training Centre and the hospital.
   5. Not applicable.

4. When changes are made in procedures and routines at the hospital about students' clinical practice, how are the tutors notified?

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Not Notified | Verbally Reported | Memo with Verbal Explanation | Memo with Written Explanation | Not Applicable |

5. When changes are made in procedures and routines at the Medical Training Centre about students' clinical practice, how are the hospital staff notified?

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Not Notified | Verbally Reported | Memo with Verbal Explanation | Memo with Written Explanation | Not Applicable |

## A:2 Formal Coordination

6. Is there a formal coordinator of students' clinical practice between the Medical Training Centre and the hospital?

   There is a:

   1. Formal coordinator of students' clinical practice between the Medical Training Centre and the hospital.
   2. Named coordinator who has other responsibilities.
   3. Special coordinating committee.
   4. Clinical instructor or tutor.
   5. No specific person, informal coordination between the Medical Training Centre and the hospital

*The rating responses of 1 - 3 for items 1 - 3 were interpreted as denoting formal agreements and items rated 4 were interpreted as denoting informal agreements. The rating responses for items 4 and 5 that were rated as 1 - 2 were interpreted as denoting informal agreements and the rating responses of 3 and 4 were interpreted as denoting formal agreements. The rating responses for item 6 that were rated 1 - 4 were interpreted as denoting formal coordination and the rating responses of 5 were interpreted as denoting informal coordination.*

## SECTION B

## INTENSITY OF THE RELATIONSHIP BETWEEN THE MEDICAL TRAINING CENTRE AND THE PROVINCIAL HOSPITAL

## B:1 Frequency of Interaction

7. How often do tutors visit students during clinical practice?

| Never | Once or Twice a Year | 3-4 Times a Year | 5-6 Times a Year | 7 or More Times a Year | Not Applicable |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |

8. How often do clinical instructors meet with tutors to discuss matters relating to students' clinical practice?

| Never | Once or Twice a Year | 3-4 Times a Year | 5-6 Times a Year | 7 or More Times a Year | Not Applicable |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | [✓ 5] | 6 |

9. How often do students attend classes held at the Medical Training Centre during clinical practice?

| Never | Once or Twice a Year | 3-4 Times a Year | 5-6 Times a Year | 7 or More Times a Year | Not Applicable |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |

10. How often do tutors and clinical instructors communicate about students' performance during clinical practice?

| Never | Once or Twice a Year | 3-4 Times a Year | 5-6 Times a Year | 7 or More Times Year | Not Applicable |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |

11. How often do students communicate with the tutors while on clinical practice?

| Never | Once or Twice a Year | 3-4 Times a Year | 5-6 Times a Year | 7 or More Times Year | Not Applicable |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |

12. How often are clinical instructors involved in the instruction of students at the Medical Training Centre?

| Never | Once or Twice a Year | 3-4 Times a Year | 5-6 Times a Year | 7 or More Times Year | Not Applicable |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |

13. How often do tutors receive assistance from the clinical instructors in developing courses or goals for clinical practice?

| Never | Once or Twice a Year | 3-4 Times a Year | 5-6 Times a Year | 7 or More Times Year | Not Applicable |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |

*The responses for items 7 - 13 were treated as follows:*

*1-3 times a year were treated as representing "low" frequency of instruction.*

*4-5 times a year were treated as representing "high" frequency of interaction.*

## B:2 Relative Resource Commitment

14. Is there a specific budget for expenditures incurred due to your involvement in the students' clinical practice?

There is a:

1. Specific budget for expenditures incurred.
2. Money available from other accounts.
3. [✓ Money difficult to obtain for such expenditure.]
4. No money is available for such expenditure.

*The rating responses for this item were interpreted as follows: 1-2 = high resource commitment; 3 = low resource commitment and 4 = N/A.*

15. How many student do you have in clinical practice in your department at a time?

| None | 1 Student | 2 Students | 3 Students | 4 or More Students | Not Applicable |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |

*The rating responses for this item were interpreted as follows: 1 = N/A; 2-3 = represented low resource commitment; and 4-5 = high resource commitment.*

16. How many clinical instructors teach courses at the Medical Training Centre?

| None | 1 Clinical Instructor | 2 Clinical Instructors | 3 Clinical Instructors | 4 or More Clinical Instructors | Not Applicable |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |

*The rating responses for this item were treated as follows: 1 = None; 2-3 = low resource commitment; 4-5 = high resource commitment; 6 = not applicable.*

17. How many tutors are involved in students' clinical practice in your hospital?

| None | 1 Tutor | 2 Tutors | 3 Tutors | 4 Tutors or More | Not Applicable |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |

*The rating responses for this item were interpreted as follows: 1 = none; 2 = low resource commitment; 3 = medium resource commitment; 4-5 = high resource commitment.*

18. How often does the hospital purchase or order therapeutic equipment and materials while students are in clinical practice?

| Never | Twice a Year | 3 Times a Year | 4 Times a Year | 5 or More Times a Year | Not Applicable |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |

*The rating responses for this item were interpreted as follows: 1 = none; 2-3 = low resource commitment; 4-5 = high resource commitment.*

## SECTION C

## RECIPROCITY OF THE RELATIONSHIP BETWEEN THE MEDICAL TRAINING CENTRE AND THE PROVINCIAL HOSPITAL

### C:1 Resource Reciprocity

19. To what extent do the Medical Training Centre and the hospital mutually exchange or share funds while the students are in clinical practice?

| Never | The M.T.C. shares its funds with the hospital | The hospital shares its funds with The M.T.C. | Both the hospital and the M.T.C. share the funds | Not Applicable |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

20. To what extent do the hospital and the Medical Training Centre mutually exchange therapeutic equipment and materials while the students are in clinical practice?

| Never | The M.T.C. exchanges its therapeutic equipment with the hospital | The hospital exchanges its therapeutic equipment with the M.T.C. | Both the hospital and the M.T.C. exchange therapeutic equipment | Not Applicable |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

21. To what extent do the hospitals and the Medical Training Centre mutually exchange information and ideas while the students are in clinical practice?

| Never | The M.T.C. exchanges information and ideas with the hospital | The hospital exchanges information and ideas with the M.T.C. | Both the hospital and the M.T.C. exchange information and ideas | Not Applicable |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

*The rating responses for itmes 19-21 were interpreted as follows: 1 = there is no exchange or sharing of resources; 2-3 = unilateral exchange, the flow of resources was in one direction; 4 = bilateral or reciprocal exchange, the flow of resources was in both directions; 5 = not applicable.*

## C:2 Definitional Reciprocity

22. To what extent is the sharing or exchange of information between the clinical instructors and the tutors mutually agreed upon?

    1. Mutual agreement between the clinical instructors and the tutors.

    2. Some agreement between the clinical instructors and the tutors.

    3. Unilateral decision by one institution.

    4. Not applicable.

23. To what extent is the exchange or sharing of clinical instructors between the Medical Training Centre and the hospital mutually agreed upon?

    1. Mutual agreement between the hospital and the Medical Training Centre.

    2. Some agreement between the Medical Training Centre and the hospital.

    3. Unilateral decision by one institution.

    4. Not applicable.

24. To what extent is the exchange of equipment and materials for learning purposes between the Medical Training Centre and the hospital mutually agreed upon?

    1. Mutual agreement between the Medical Training Centre and the hospital.

    2. Some agreement between the Medical Training Centre and the hospital.

    3. Unilateral decision by one institution.

    4. Not applicable.

25. To what extent is the exchange or sharing of tutors between the hospital and the Medical Training Centre for consultation purposes mutually agreed upon?

    1. Mutual agreement between the Medical Training Centre and the hospital.

    2. Some agreement between the hospital and the Medical Training Centre.

    3. Unilateral decision by one institution.

    4. Not applicable.

26. To what extent is the referral of patients from the hospital to the Medical Training Centre for students' learning purposes mutually agreed upon?

    1. Mutually agreed upon between the Medical Training Centre and the hospital.

    2. Some agreement between the Medical Training Centre and the hospital.

    3. Unilateral decision by one institution.

    4. Not applicable.

27. To what extent is the sharing of physical facilities in the hospital by the tutors and the students mutually agreed upon?

    1. Mutually agreed upon between the hospital and the Medical Training Centre.

    2. Some agreement between the hospital and the Medical Training Centre.

    3. Unilateral decision by one institution.

    4. Not applicable.

*The rating responses used for items 22 - 27 were interpreted as follows: 1-2 = mutual agreement; 3 = unilateral decision and 4 = not applicable.*

## SECTION D

## STANDARDIZATION OF THE RELATIONSHIP BETWEEN THE MEDICAL TRAINING CENTRE AND THE HOSPITAL

### D:1 Procedure Standardization

28. Are there specific written procedures, rules and regulations which clearly delineate interrelationships between the Medical Training Centre and the hospital during students' clinical practice?

    1. None.
    2. Poorly written.
    3. Generally understood.
    4. Clearly written.
    5. Very clearly documented.
    6. Not applicable.

29. Are the job descriptions for third-year students clear and explicit?

    1. Non-existent.
    2. Poorly written.
    3. Generally understood.
    4. Clearly written.
    5. Very clearly documented.
    6. Not applicable.

30. Are the job descriptions for clinical instructors clear and explicit?

    1. Non-existent.
    2. Poorly written.
    3. Generally understood.
    4. Clearly written.
    5. Very clearly documented.
    6. Not applicable.

31. Are there written guidelines that clearly specify the conditions under which resources would be exchanged or shared between the Medical Training Centre and the hospital?

    1. Non-existent.
    2. Poorly written.
    3. Generally understood.
    4. Clearly written.
    5. Very clearly documented.
    6. Not applicable.

*The rating responses used for items 28-31 were interpreted as follows:*
*1 = non-existent; 2-3 = low; 4-5 = high; 6 = not applicable.*

# APPENDIX B

## Interview Guide

## INTERVIEW GUIDE

1. How do you find the relationship between the Medical Training Centre and your hospital when students are in clinical practice?

2. How do you determine the attainment of goals of clinical practice for the third year students?

3. Are there some facilities that your hospital lacks when students are in clinical practice? If yes, what are they?

4. Do you have problems in supervising or coordinating clinical practice for the third year students?

5. What problems do you think the third year students encounter in their clinical practice?

6. What contributions do the tutors make in helping the students to achieve the goals of clinical practice?

7. Do the decisions made by the tutors regarding students' clinical practice influence your evaluation of students' performance during clinical practice?

8. What are the major evaluation criteria in your hospital for assessing the effectiveness of clinical practice?

9. Would you comment on the job descriptions for the clinical instructors and for the third year students in your hospital?

10. Would you comment on the effectiveness of clinical practice for the third year students in your hospital?

11. Who coordinates the clinical practice for the third year students in your hospital?

12. Do you have any ideas or information on how the goals of clinical practice for the third year may be achieved successfully?

13. What is your opinion about the supervision of students by clinical instructors in your hospital?

14. How do the policies, regulations and procedures, e.g. the transfer of clinical instructors or other theapists who supervise students, affect the students' clinical practice?

15. Is there any role conflict between the tutors and your therapists while students are in clinical practice? If any, how do you think the role conflict may be resolved?

16. Is there any role ambiguity in the supervision of students' clinical practice between the tutors and therapists?

17. Are you satisfied or dissatisfied with the clinical experiences for third year students? What are your reasons for satisfaction or dissatisfaction?

# APPENDIX C

## Letter to the Office of the President Requesting for Permission to Conduct the Research in Kenya

**MINISTRY OF HEALTH**

Telegrams: "MEDTRAIN", Nairobi
Telephone: Nairobi 336511/12
Please address all correspondence to:
The Principal
When replying please quote
Ref. No. MTC.152102
and date

MEDICAL TRAINING CENTRE
P.O. Box 30195
NAIROBI

July 11, 1980

The Office of the President,
Cabinet Affairs,
P.O. Box 30510,
NAIROBI, Kenya.
att: Mr. E.K. Ruchiami

Thro' The Principal,
Medical Training Centre,
P.O. Box 30195,
NAIROBI, Kenya.

Dear Sir:

RE: PROVISIONAL PERMISSION TO CONDUCT RESEARCH IN KENYA

I would be very grateful if you can give me provisional permission to conduct research in Kenya while awaiting my application to go through the National Research Committee.

I am a Ph.D. candidate at the University of Alberta, Canada and I will be in Kenya for three months to complete my research data collection. My research will be on: INTERORGANIZATIONAL LINKAGES AND THE EFFECTIVENESS OF CLINICAL EXPERIENCES IN TWO ALLIED HEALTH PROFESSIONS.

I have discussed my research with Dr. Migue, the Principal/ Senior Deputy Director of Medical Services who is my co-ordinator for the three months that I will be in Kenya.

Hoping to be given the provisional permission.

Yours sincerely,

(ALFRED MUTEMA)
Ph.D. (Candidate)

c.c. The Secretary
National Council for Science and Technology
P.O. Box 30623
NAIROBI, Kenya

# APPENDIX D

## Letter to All the Respondents Informing Them About the Research

**MINISTRY OF HEALTH**

Telegrams: "MEDTRAIN", Nairobi
Telephone: Nairobi 336511/12
Please address all correspondence to:
The Principal
When replying please quote

Ref. No. ........................
and date

MEDICAL TRAINING CENTRE
P.O. Box 30195
NAIROBI

June 15, 1980

Dear Colleague,

I am currently in Kenya for three months conducting my Ph.D. research of which you have been selected as one of the therapists in occupational therapy and physiotherapy who will be involved in the study.

My research will be on "INTERORGANIZATIONAL LINKAGES AND THE EFFECTIVENESS OF CLINICAL EXPERIENCES IN OCCUPATIONAL THERAPY AND PHYSIOTHERAPY IN KENYA". The purpose of this study is simply to examine the relationships that exist between the Medical Training Centre and the hospitals, and to explore how these relationships affect the effectiveness of clinical experiences in occupational therapy and physiotherapy programs in Kenya.

Such a study will be useful in the future development, planning and reorganization of these two programs. Your contributions in this study will have great impact in these two professions since the outcome and recommendations of this study will provide guidelines to the professionals and administrators in the Ministry of Health in providing the necessary and adequate human and physical facilities both at the Medical Training Centre and in the hospitals in order to improve the students' clinical experiences.

In this study, two questionnaires will be used. One will collect data on effectiveness of clinical experience in occupational therapy and physiotherapy and the other will collect data on the relationships between the Medical Training Centre and the hospitals where students go for clinical practice.

I will be forwarding these questionnaires to you later.

In case you want a copy of my research proposal please let me know. I will be glad to provide you with one copy.

Yours sincerely,

ALFRED M. MUTEMA
Ph.D. (Candidate)
University of Alberta

## APPENDIX E

## Letter That Was Attached to the Questionnaire

**MINISTRY OF HEALTH**

Telegrams: "MEDTRAIN", Nairobi
Telephone: Nairobi 336511/12
Please address all correspondence to:
The Principal
When replying please quote

Ref. No. ........................
and date

MEDICAL TRAINING CENTRE
P.O. Box 30195
NAIROBI

July 16, 1980

Dear Sir/Madam:

The attached questionnaire was designed to gather information on my study in "INTERORGANIZATIONAL LINKAGES AND THE EFFECTIVENESS OF CLINICAL PRACTICE IN TWO ALLIED HEALTH PROFESSIONS IN KENYA". The study has three major purposes: (1) to describe the relationships between the Medical Training Centre and the provincial hospitals; (2) to determine the effectiveness of clinical practice in the provincial hospitals and (3) to examine the relationships between the linkage dimensions and the effectiveness of clinical practice.

The results of this study will provide information to the professionals and administrators in the departments of occupational therapy, physiotherapy and the Ministry of Health in Kenya on how to improve the effectiveness of clinical practice in these two allied health professions.

I am particularly desirous of obtaining your responses because your contribution will significantly assist me in achieving the purpose of this study. The enclosed questionnaire has been tested with a sampling of occupational therapy students, physiotherapy students, occupational therapists, and physiotherapists at the University Hospital in Alberta in Canada. I have revised it in order to make it possible for us to obtain all the necessary data while requiring a minimum of your time.

The average time required to complete all the items in the questionnaire is fifteen minutes.

Part 1 and Part 2 of the questionnaire will be completed by all the respondents involved in the study and Part 3 will be completed by department heads in the departments of occupational therapy and physiotherapy in the provincial hospitals.

I will appreciate if you complete the attached questionnaire before 27th August, 1980 and return it to the Medical Training Centre through the general office in your hospital.

. . . /2

I will welcome any suggestion and comments that you may have concerning my study. I will be pleased to send you a summary of my research findings if you desire.

Thank you very much for your cooperation.

Yours sincerely,

ALFRED MUTEMA
Ph.D.(Candidate)

# APPENDIX F

## Letter of Research Clearance from the Office of the President, Cabinet Affairs

OFFICE OF THE PRESIDENT
CABINET AFFAIRS

Telegrams: "Rais", Nairobi
Telephone: Nairobi 27411
When replying please quote
Ref. No. OP.13/001/10C266/4
and date

P.O. Box 30510
NAIROBI, KENYA

15th July, 1980

Mr. Alfred Mutema,
Medical Training Centre,
NAIROBI.

Dear Sir,

RESEARCH CLEARANCE

Your application for authority to conduct research on, Interorganizational Linkages and Effectiveness of Clinical Practices in Kenya," is being processed.

While awaiting the final clearance you are hereby permitted to contact the Ministry of Health for your preliminary Survey.

Yours faithfully,

E.K. RUCHIAMI
for: PERMANENT SECRETARY

c.c.
The Permanent Secretary,
Ministry of Health,
NAIROBI.

The Secretary,
National Council for Science & Technology,
P.O. Box 30623,
NAIROBI.

# APPENDIX G

## Letter of Research Approval from the Office of the President, Cabinet Affairs

OFFICE OF THE PRESIDENT

Telegrams: "SCIENCETECH", Nairobi
Telephone: Nairobi 336173
When replying please quote
Ref. No. NCST/SEC/4300.341
and date

NATIONAL COUNCIL FOR SCIENCE
AND TECHNOLOGY
P.O. Box 30623, NAIROBI
KENYA

8th August, 1980

Mr. Alfred M. Mutema,
Department of Educational Administration,
University of Alberta,
Edmonton, Canada

## RESEARCH CLEARANCE

Your application to conduct research on "Interorganizational Linkages and the Effectiveness of Clinical Practice in Physical Medicine" has been approved.

Thitai

G. N. W. Thitai (Mrs)
for: SECRETARY, NATIONAL COUNCIL FOR SCIENCE
AND TECHNOLOGY

c.c. Mr. E. K. Ruchiami,
Office of the President,
NAIROBI

# APPENDIX H

## Letter to the Permanent Secretary Ministry of Health Regarding the Research Proposal

MINISTRY OF HEALTH

Telegrams: "MEDTRAIN", Nairobi
Telephone: Nairobi 336511/12
Please address all correspondence to:
The Principal
When replying please quote

Ref. No. ........................
and date

MEDICAL TRAINING CENTRE
P.O. Box 30195
NAIROBI

September 2, 1980

The Permanent Secretary
Ministry of Health
P.O. Box 30016
NAIROBI, Kenya

ATT: Dr. J.M. GEKONYO:

Thro' The S.D.D.M.S./Principal
Medical Training Centre
P.O. Box 30195
NAIROBI, Kenya

Dear Sir:

RE: Ph.D. RESEARCH PROPOSAL

With reference to Professor Seger's letter dated May 27th, 1980, please attached is my research proposal that was accepted by my Supervisory committee at the University of Alberta, Canada.

I have completed conducting my research in Kenya and I will be leaving to the University of Alberta on 13th September, 1980 to complete my doctoral degree requirements.

I will be glad to present a copy of my thesis to the Ministry of Health after my studies in June, 1981.

Yours faithfully,

Alfred Mutema
(Ph.D. CANDIDATE)